



Rater News Fall 2023

Welcome to the Fall 2023 issue of *Rater News*
Brought to you by the Washington State University Energy Program

In this issue:

[News from Jonathan Jones](#)

[WSU Energy Program News](#)

[RESNET News](#)

[Newsbriefs](#)

[Training Opportunities](#)

[Conferences and Events](#)

[Technical Q&As Answered](#)

News from Jonathan Jones

Reminder: Sunsetting of WSU Energy Program's HERS Quality Assurance Provider Program

For decades the Washington State University Energy Program and its predecessor have been committed to providing energy services, products, information, and education to individuals, businesses, government agencies and more with a focus on residential, commercial, industrial, and agricultural energy efficiency.



We are a self-supported department within the university and have operated much like a consulting business.

Our involvement in residential new construction program(s) including the HERS provider program and subsequent dovetailing into ENERGY STAR, the U.S. DOE Zero Energy Ready program, and the Water Sense program was based more than a decade ago on the recognition that there was a regional void for raters and individuals to participate in these programs and several other energy efficiency programs.

Since our initial involvement began, all of these programs have evolved and matured and there has been a dramatic increase in the number of businesses and other organizations that are offering their services to support these programs as official program providers.

Rather than attempt to compete with these for profit, non-profit, and not for profit businesses and other entities in an open market environment, the WSU Energy Program will be sunsetting its HERS Quality Assurance Provider program effective **December 31, 2023**.

We remain committed to residential energy efficiency and will be focusing on expanding our educational and training program services for the HERS, ENERGY STAR, Washington State Residential Energy Codes and more and will retain our status as an official HERS Training Provider.

We are honored to have been your provider in support of residential energy efficiency and applaud all of you for your commitments to making our region a leader in these programs. We will continue to support all of your efforts as the technical support for the Washington State Energy Code and our soon to be expanded educational opportunities for the HERS, and ENERGY STAR programs.

If you have any questions please do not hesitate to contact Jonathan Jones, program lead at [NWraater@energy.wsu.edu](mailto:NWrater@energy.wsu.edu) or 360-956-2101.

WSU Energy Program News

WSU Energy Conscious Construction Programs

WSU's School of Design and Construction programs in Energy Conscious Construction (ECC) offer an interdisciplinary emphasis in energy-efficient residential buildings, with a focus on the state of Washington and covering all phases of the design process from design through construction and post occupancy evaluation. The ECC offers both graduate and undergraduate certificates. The programs are interdisciplinary, affordable and quick, prepare you for Washington State's Progressive initiatives, and are convenient. Coursework is delivered asynchronously allowing you to complete at your convenience. For more information: [Click here](#).

RESNET News

EMPOWERED Program: Free Online Clean Energy Safety Training Available

The U.S. Department of Energy's Education Materials for Professional Organizations Working on Efficiency and Renewable Energy Developments (EMPOWERED) program, is providing free online education and training on clean energy technologies safety and installation. The EMPOWERED program, via the websites [CleanEnergyTraining](#) and [CleanEnergyClearinghouse](#) offers videos, guides, and select CEU-bearing courses through the International Code Council (ICC), International Association of Electrical Inspectors (IAEI), and the North American Board of Certified Energy Practitioners (NABCEP)—RESNET, July 31, 2023: <https://www.resnet.us/articles/empowered-program-free-online-clean-energy-safety-training-available/>

2023—On Pace to be a Record Year for HERSH2O® Ratings

Water efficiency ratings are picking up steam. RESNET's HERSH2O® whole-house water efficiency rating program is on pace to increase more than 60 percent over 2022 numbers...



One of the driving forces behind HERSH2O® Ratings is the ability of builders to achieve the WaterSense Labeled Home Certification. RESNET® is a WaterSense Home Certification Organization and HERSH2O® is a WaterSense Approved Certification Methodology... Want to start offering water efficiency ratings? For more info see: RESNET, Blog, September 6, 2023:

<https://www.resnet.us/articles/2023-on-pace-to-be-a-record-year-for-hersh2o-ratings/>

RESNET® Approved by (DOE) as an HCO for DOE Zero Energy Ready Home Program

RESNET® is proud to announce its recognition by the U.S. Department of Energy (DOE) as a Home Certification Organization (HCO) for the DOE Zero Energy Ready Home Single Family Homes V2 nationally... A DOE Zero Energy Ready Home is a high-performance home that is so energy efficient a renewable energy system could offset most or all of the home's annual energy use... Builders can receive up to a \$5,000 federal tax credit—RESNET, Blog, September 12, 2023: [RESNET® Approved by \(DOE\) as an HCO for DOE Zero Energy Ready Home Program - RESNET](https://www.resnet.us/articles/resnet-approved-by-doe-as-an-hco-for-doe-zero-energy-ready-home-program-resnet)



RESNET to Develop ANSI Candidate Standard Process on Embodied Carbon

A critical element in the decarbonization of homes is the embodied carbon produced in the manufacture and shipping of the building materials used in the construction of homes. Many times, particularly with highly energy-efficient homes, the embodied carbon in the home's building products can equal the carbon produced by the energy consumed in the operation of the home. The current RESNET Carbon Index® only covers the carbon produced in energy used in a home... RESNET® has embarked on an effort to develop an ANSI candidate consensus standard to calculate the embodied carbon in residential building materials—RESNET, Blog, October 5, 2023:

<https://www.resnet.us/articles/resnet-to-develop-ansi-candidate-standard-process-on-embodied-carbon/>

IRS Guidance on the Revised 45L Federal Energy Efficient Home Tax Credit

The US Treasury's Internal Revenue Service (IRS) has released guidance on the federal Energy Efficient Home Tax Credit (45L), which was extended and amended by Congress in the Inflation Reduction Act (IRA). The IRA extended and enhanced the energy-efficient home credit (45L) and allows home builders who construct, reconstruct, or rehabilitate energy-efficient homes a tax credit of up to \$5,000 per home. The IRS' guidance provides clarity to home builders on the qualifications for the credit and answers many of the questions RESNET® has received since the IRA was enacted... There will be a general session at the 2023 RESNET® Conference in San Diego on the new 45L federal tax credit guidelines featuring Jonathan Passe of EPA and Eric Werling of DOE. For information on the RESNET® conference and to register go to <https://resnet.arinex.one/> For further information and to download the IRS 45L guidelines, see RESNET, Blog, September 29, 2023: <https://www.resnet.us/articles/irs-guidance-on-the-revised-45l-federal-energy-efficient-home-tax-credit/>

RESNET® Appoints ESG Advisory Group; Matthew Cooper Selected as Chair

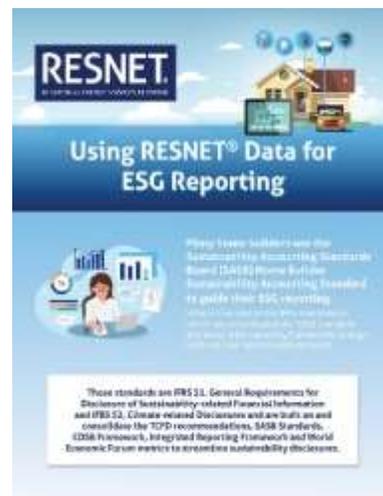
RESNET® HERS® Ratings are increasingly becoming the metric for Environmental, Social, and Governance (ESG) reporting on the energy performance of homes. ESG has become an integral

factor in the financial world. The Structured Finance Association estimates that \$11.6 trillion, or \$1 of every \$4 invested in the United States, was invested under ESG investment strategies. The National Bureau of Economic Research reported that investors are, “willing to pay 20 basis points more in annual fees for sustainable funds.” This movement provides exciting opportunities for RESNET® and the HERS® industry—RESNET, Blog, June 20, 2023:

<https://www.resnet.us/articles/resnet-appoints-esg-advisory-group-matthew-cooper-selected-as-chair/>

RESNET® Releases New Infographic on Using RESNET® Data for ESG [Environmental, Social, Governance] Reporting

Builders with homes HERS® and HERSH2O® rated can use RESNET® National Buildings Registry data to assist with reporting per the Sustainability Accounting Standards Board (SASB) Home Builder Sustainability Accounting Standard. Sustainability accounting standards are non-financial, sector-specific reporting standards that track and communicate the environmental, social, and governance impacts of a company. It allows stakeholders to make informed decisions about the company’s commitment to sustainable, social and governance practices. For more information, listen to [RESTalk EP119: RESNET’s New ESG Advisory Group with Matthew Cooper](#), PEG recorded August 10, 2023. Click here to download the full [Using RESNET® Data for ESG Reporting](#) infographic.



RESNET® Accredited Software Providers Include the RESNET® Carbon Index

RESNET® Accredited Software Providers Energy Gauge, Ekotrope, and REM/Rate each support the [RESNET® Carbon Index](#) in their respective software... The RESNET® Carbon Index, introduced earlier this year, shows the climate change impact of a home relative to a reference home which is very similar to the HERS® reference home. The RESNET® Carbon Index provides a more accurate metric to measure emissions and addresses when energy is used in a home and how much can be reduced. The RESNET® Carbon Index is based on ANSI/RESNET®/ICC 301 2022 Addendum B CO2e Rating Index, 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 on the RESNET® Carbon Index, visit <https://www.resnet.us/about/resnet-carbon-rating-index/>. Click here to download the full [RESNET® New Carbon Rating Index](#) infographic.



Newsbriefs

Reminder: High-Efficiency Electric Home Rebate Act (HEEHRA)

The High-Efficiency Electric Home Rebate Act (HEEHRA) provides point-of-sale consumer rebates to enable low- and moderate-income households across America to electrify their homes... HEEHRA is a voluntary program that covers 100 percent of electrification project costs (up to \$14,000) for low-

income households and 50 percent of costs (up to \$14,000) for moderate-income households. For more information see: Rewiring of America's [High Efficiency Electric Home Rebat Act](#).

Earth Advantage Partners with the GreenHome Institute to Provide Certification Data to the Green Building Registry

Earth Advantage®, Inc. and the GreenHome Institute announced today a partnership to deliver GreenStar Homes certification data through the Green Building Registry® (GBR). This partnership will provide easy access to this Certification data to the market and help facilitate inclusion in real estate listings... Since 2017, Earth Advantage's self-funded, Green Building Registry has provided home performance data to the public and real estate multiple listing services. GBR partners with programs to provide verified data directly from sources such as the U.S. Department of Energy's Home Energy Score program, LEED® for Homes, ENERGY STAR®, HERS® Index Scores, and other national and regional third-party verification programs—Earth Advantage, *News*, July 31, 2023: <https://www.earthadvantage.org/news/%C2%A0earth-advantage-partners-with-the-greenhome-institute-.html>

Weighing the Cost of Embodied Carbon

There was a time when we worried only about energy consumption in our houses and tried to reduce it by adding more insulation to the walls and additional layers of glass to the windows. Some pushed the envelope to achieve the tough Passive House standards. But now that we worry about embodied carbon too, some are pushing back. Architect and instructor Kelly Alvarez Doran, for example, says it could take 100 years to pay back the carbon debt for the extra pane in a triple-glazed window—Lloyd Alter, *Green Building Advisor*, September 13, 2023: <https://www.greenbuildingadvisor.com/green-homes/weighing-the-cost-of-embodied-carbon>

Built Green Conference 2023

The 2023 [Built Green Conference](#) was held on September 14th at the Lynnwood Event Center. This year attendees could choose from four session tracks, along with the concurrent Built Green Project Basics programming, to curate their own experience. Conference tracks included Adapting Policy, Code Academy, Innovative Approaches, and Decarbonizing Case Studies. The day was filled with reunions, new connections, networking, and captivating sessions. [Read the full recap and takeaways.](#)



State's Reworked Heat Pump Rules Get a Cool Reception from Critics

Washington regulators on Friday veered away from requiring builders to install electric heat pumps rather than natural gas furnaces in new homes, apartments and commercial buildings. The proposed changes will undergo public review, with at least one hearing, possibly in November. They are now set to take effect March 15, 2024 barring unforeseen twists, such as a legal challenge. Buildings they construct... Instead, in an expected move, the Washington State Building Code Council settled on an overhaul of energy regulations aimed at beefing up incentives for choosing heat pumps and making a construction permit a little more difficult to obtain if builders don't—Jerry Cornfield, *Washington State Standard*, September 15, 2023:

<https://washingtonstatestandard.com/2023/09/15/washingtons-reworked-heat-pump-rules-get-a-cool-reception-from-critics/>

Earth Advantage Launches the Oregon Residential Construction Career Hub

Earth Advantage & EnerCity Collaborative has launched a new website with support from Energy Trust of Oregon. This website, titled [Oregon Residential Construction Career Hub \(the Hub\)](#), helps bridge the employment gap in the residential construction industry by connecting employers with prospective workers interested in aligning their careers with the growing demand for energy efficient homes—Energy Trust of Oregon, *Insider*, September 18, 2023:

https://insider.energytrust.org/earth-advantage-launches-the-oregon-residential-construction-career-hub/?utm_source=Newsletter%3A+Insider&utm_campaign=2415e4006b-EMAIL_CAMPAIGN_2019_08_06_07_00_COPY_01&utm_medium=email&utm_term=0_8ce97394fa-2415e4006b-63146842

DOE Makes \$400M Available to Assist States, Territories in Adopting Energy-Efficient Building Codes

The U.S. Department of Energy on Tuesday announced \$400 million in formula funding to assist in the adoption and implementation of updated building energy codes for new residential and commercial construction. States and territories will be able to reserve funds with a commitment to adopt either the latest model energy codes or zero energy codes, a senior DOE official said in a Monday call with reporters. They have 60 days to indicate their intention to adopt new codes—Robert Walton, *Utility Dive*, September 19, 2023: https://www.utilitydive.com/news/doe-Biden-400-million-states-building-codes/694053/?utm_source=Sailthru&utm_medium=email&utm_campaign=Issue:%202023-09-19%20Utility%20Dive%20Newsletter%20%5Bissue:54641%5D&utm_term=Utility%20Dive

https://www.utilitydive.com/news/doe-Biden-400-million-states-building-codes/694053/?utm_source=Sailthru&utm_medium=email&utm_campaign=Issue:%202023-09-19%20Utility%20Dive%20Newsletter%20%5Bissue:54641%5D&utm_term=Utility%20Dive

Green Building Registry® Data Ecosystem [White Paper]

To value the sustainable, renewable, and energy-efficient assets of a home, real estate stakeholders need trustworthy data at the time of sale. As more homes receive home energy assessments, have rooftop solar and/or batteries installed, and receive thirdparty home certifications, it is critical that third-party documentation is created, and the real estate marketplace integrates this information into the marketing and financing of a home. The Green Building Registry (GBR) works to aggregate and provide home performance data to homeowners, real estate agents, appraisers, and lenders across the US. This whitepaper outlines the different pieces of the GBR ecosystem, along with the benefits of making home performance data transparent and accessible in the market—Earth Advantage, *News*, September 25, 2023:

<https://www.earthadvantage.org/news/green-building-registry-data-ecosystem.html>

The International Code Council Collaborates with The Tiny Home Industry Association to Address Tiny Home Construction and Safety

The International Code Council, in collaboration with the Tiny Home Industry Association (THIA), recently published *The Tiny House - Building it Right: From the Publisher of the Building Codes guide*. The illustrated guide covers the proper construction of tiny homes including movable tiny homes (MTHs)... *The Tiny House - Building it Right* guide focuses on the planning, design, permitting, construction and inspection of tiny houses. Code section references are provided throughout. The guide also covers the various types of tiny houses and familiarizes builders of tiny houses with the requirements contained in the International Residential Code® (IRC®)—International Code Council, [News Release], October 9, 2023: <https://www.iccsafe.org/wp-content/uploads/The-International-Code-Council-Collaborates-with-The-Tiny-House-Industries-Association-to-Address-Tiny-Home-Construction-and-Safety.pdf>



Training Opportunities

New Training Videos on BetterBuiltNW and Earth Advantage Now Available on YouTube

Thirteen new videos from BetterBuiltNW and Earth Advantage provide viewers with a better understanding of building practices that promote quality construction and improved comfort for homeowners. For more information see: BetterBuiltNW, September 27, 2023: <https://betterbuiltnw.com/news/new-training-videos-on-betterbuiltnw-and-earth-advantage-now-available-on-youtube>

- Visit BetterBuiltNW's YouTube channel [here](#).
- Visit Earth Advantage's YouTube channel [here](#).

How to Cost Effectively Build Zero Energy Homes

Earth Advantage has teamed up with BetterBuiltNW and EEBA to launch this no-cost, 3-hour online training designed for NW audiences to learn about Zero Energy (ZE) home design and construction. Participants will learn how to eliminate common barriers to ZE home construction, benefit from project spotlights, and can earn a 'Zero Energy Professional' designation. [Click here](#) for more information and to register for this online course available on-demand.

ENERGY STAR Residential New Construction webinars

Need to brush up on ENERGY STAR Single-Family Version 3.1 or Multifamily Version 1.1? Interested in learning more about ENERGY STAR NextGen Homes? Visit the Residential New Construction ENERGY STAR recorded webinars webpage for recently recorded webinars:



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

Conferences and Events

All About ADUs (In Person, Live and On-Demand Webinar Options Available)

Participants will gain critical information to help them to respond to increasing client demand for properties with ADU potential, as well as the opportunity to earn the 'ADU Specialist' professional accreditation.

Upcoming in-person events:

- Southern Oregon November 8
- Portland, Oregon November 15
- Seattle, WA December 6,7

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

Four Essential Tips on Ventilation Solutions to Help You Meet the Latest Energy Codes: October 19 Webinar

Most Home Builders are struggling to design ventilation systems that meet the new IECC state building codes and ENERGY STAR for Homes version 3.1's mandatory, delivered ventilation air flow rates to qualify for the 45L Federal Tax Credit. By the end of this training, Home Builders will have the knowledge and skills necessary to design and implement cost-effective ventilation systems that meet state and federal regulations while achieving maximum efficiency. For more information and to register: [Click here](#).

Register Now for Energy Trust's Fall Trade Ally Forums in October

Join us for Energy Trust's Fall Trade Ally Forums in Portland, Grants Pass, and Bend... The Fall Forums will include updates from Energy Trust's executive director and director of energy programs on our current state and plans for the future, along with technical breakouts, incentive updates and other insights tailored for each region. Vendors will have tables at each location to make connections and share their current products and offers.

- [Portland – Thursday, October 19 at Sheraton Portland Airport Hotel](#)
- [Grants Pass – Thursday, October 26 at Bethany Presbyterian Church](#)
- [Bend – Friday, October 27 at Riverhouse on the Deschutes Convention Center](#)

For more information see: Energy Trust of Oregon, *Insider*, September 18, 2023: <https://insider.energytrust.org/save-the-date-for-trade-ally-forums-in-october/>

2023 RESNET Conference, November 15-17, San Diego, CA

The Annual in person RESNET Conference is back and will be held November 15-17, 2023 in San Diego, CA. This conference provides a diverse and dynamic venue where you can obtain usable solutions in an ever-changing industry. See new products, network with colleagues, and earn continuing education credits. Session topics will include: Water Efficiency & HERS H2O®, HERS® as the Gold Standard, Energy Codes, Latest Developments in Building Science, Workforce Development, the New 45L Federal Tax Credit, and more. For more information and to register [Click here](#).



NAHB International Builders' Show 2024, February 27-29, Las Vegas

The NAHB International Builders' Show® (IBS) connects, educates and improves the residential construction industry. Discover thousands of new products, explore the latest industry trends, and stay up to date with the industry at the annual NAHB International Builder's Show. Take advantage of early registration by January 5. For more information and to register see: [https://www.buildersshow.com/september-](https://www.buildersshow.com/september-deals?utm_id=ibs24_attendee_conversion&utm_source=higher_logic&utm_medium=email&utm_term=non-member&utm_content=em24061-2701&utm_campaign=ibs24_attendee_conversion)



[deals?utm_id=ibs24_attendee_conversion&utm_source=higher_logic&utm_medium=email&utm_term=non-member&utm_content=em24061-2701&utm_campaign=ibs24_attendee_conversion](https://www.buildersshow.com/september-deals?utm_id=ibs24_attendee_conversion&utm_source=higher_logic&utm_medium=email&utm_term=non-member&utm_content=em24061-2701&utm_campaign=ibs24_attendee_conversion)

Technical Q&As Answered

U-Factors for Non-Prescriptive Building Assemblies in Washington State

What is a U-factor

The U-factor of a building assembly, such as a wall, ceiling or floor, is a measure that quantifies the insulating value of that building assembly. It is directly proportional to the heat loss through the assembly for a given area and temperature difference across the wall. This means *the lower* the U-factor, *the better* insulated the assembly is.

The U-factor is used to calculate heat loss through an assembly with this equation:

$$\text{Heat Loss} = \text{U-factor} \times \text{Area} \times (\text{Indoor Temperature} - \text{Outdoor Temperature})$$

How are U-factors used in the WSEC-R?

Both the 2018 and 2021 versions of the WSEC-R define standard prescriptive building assemblies that meet baseline energy code requirements (refer to Table R402.1.1 in 2018 and Table R402.1.3 in 2021).

For example, in 2021 WSEC-R, there are two prescriptive constructions for above-grade walls:

- “20+5” in Table R402.1.3 refers to R-20 cavity insulation plus R-5 continuous insulation
- “13+10” in Table R402.1.3 refers to R-13 cavity insulation plus R-10 continuous insulation

You are not required to follow these prescriptive building assemblies, however. These typical constructions were defined for convenience in meeting code requirements. That is, if you follow the prescriptive assembly you do not necessarily need to worry about determining the U-factor of your assembly.

If you choose to construct a building assembly that is different than the prescriptive building assemblies, however, WSEC-R defines maximum U-factors that are equivalent to these prescriptive constructions in Table R402.1.3 in 2018 and Table R402.1.2 in 2021. For above-grade walls, for example, the equivalent maximum U-factor to meet baseline code requirements is 0.045 under 2021 WSEC-R. In this case, you have the extra task of determining the U-value (or F-value for slabs) “from measurement, calculation or an approved source” (see footnote “a” to Table R402.1.2.) The problem then becomes a matter of finding the appropriate sources of U-factors, calculating the U-factor using an approved method, or using an approved calculator. By “approved” it is meant that

you will need to submit your sources, references, calculations, and/or calculator results to your building official for their review to obtain their approval.

Where do I look first when I need to determine the U-factor of my assembly? Appendix A

The first reference to check is Appendix A of the WSEC-R itself where you will find the U-factors of many common building assemblies. Section R402.1.5 states that values from Appendix A “shall be used for all calculations” unless the “proposed construction assemblies are not represented in Appendix A.” This means the U-factors you look up in Appendix A will always be accepted by building officials.

For example, from Table A103.3.1(8), you will find that an advanced-framed 2x8 above-grade wall with R-25 fiberglass batt cavity insulation without continuous insulation and lapped wood siding has a U-value of 0.045, which meets the baseline requirements for 2021 WSEC-R (Refer to Figure 1).

Figure 1. Extract from WSEC-R Appendix A Table A102.2.1(8) for 2x8 single stud walls with R-25 batt cavity insulation. The U-factor for the case of advanced framing with no continuous insulation is circled in red.

R-value of Foam Board		Siding Material/Framing Type					
		Lapped Wood			T1-11		
		STD	INT	ADV	STD	INT	ADV
0	0.051	0.047	0.045	0.053	0.049	0.046	
1	0.048	0.045	0.043	0.049	0.046	0.044	
2	0.045	0.043	0.041	0.047	0.044	0.042	

NOTE:
Nominal Batt R-value:
R-25 at 8 inch thickness

Does 2021 WSEC-R require continuous insulation on above-grade walls? No

There are many examples of above-grade wall constructions that have a U-factor of 0.045 or less that do not include continuous insulation. The 2x8 R-25 wall in the previous question is one example. Another example is a double 2x4 wall with R-19 plus R-11 insulation, as shown in Table A103.3.3(2). (Refer to Figure 2.)

Avoiding rigid foam continuous insulation does require framing larger wall cavities to accommodate thicker layer(s) of cavity insulation, however. You will trade off the expense of installing continuous insulation for the expense of more framing.

Figure 2. WSEC-R Table A102.2.3(2) Appendix A for double 2x4 walls.

Batt Configuration			Siding Material/Frame Type			
			Lapped Wood		T1-11	
Exterior	Middle	Interior	STD	ADV	STD	ADV
R-11	--	R-11	0.050	0.046	0.052	0.048
R-19	--	R-11	0.039	0.037	0.043	0.039
R-11	R-8	R-11	0.037	0.035	0.036	0.036
R-11	R-11	R-11	0.032	0.031	0.033	0.032
R-13	R-13	R-13	0.029	0.028	0.029	0.028
R-11	R-19	R-11	0.026	0.026	0.027	0.026

To read the full *U-Factors for Non-Prescriptive Building Assemblies in Washington State FAQ* and view additional WSU Energy Code FAQs: [Click here](#).

Your WSU Energy Program Provider Team
Jonathan Jones, Gary Kaufman, and Anne Whitney
can all be reached via email at: NWrater@energy.wsu.edu

While every URL in Rater News is checked for accuracy prior to distribution, URLs may change, and servers may temporarily fail to connect to working URLs.

[Rater News](#)

Washington State University Energy Program. Home Energy Raters Program



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