

Summary of HERS Rater Information for Vermont

9/11/23

The registered professional HERS raters in Vermont as of March 2023 are:

- Al Sularz, [VT Energy Analytics and Testing](#) (802) 734-0058 VTenergyanalytics@gmail.com
- Ethan Goodkind, [Goodkind Property Inspections](#) (802) 662-2236 gkpinspections@gmail.com
- Harrison Bush, [Housewright Solutions](#) (802) 777-6762, harrison@housewrightsolutions.com
- Chris West, Eco Houses of Vermont (802) 233-2015, info@ecohousesofvt.com
- Jim Bradley, Authenticated Building Performance Diagnostics authenticateddiagnostics@gmail.com (802) 578-5007
- Gwen St Sauveur, BTF Net Zero Designs, (802) 392-3395, gwendolen@bitethefrost.com
- Scott Fillingham, BeSmart LLC (Building Efficiency Score Modeling Analysis and Results Testing), scottf@besmartvt.com

Known out of state raters who have been working in VT:

- Building Efficiency Resources (BER) ratings@theber.com
- Art Pakatar, The Pakatar Group art@thepakatargroup.com
- Adin Maynard, (merged with Power House Energy Consulting) Williamsburg, MA; (413) 658-8784, adin@powerhouseenergyconsulting.com – may be a good contact for southern VT
- ICC NTI, Luke Lehman Account Manager, 305 N. Oakland Ave, Nappanee, IN 46550, (574) 773-7975, Cell: (814) 418-7041, llehman@icc-nta.org
- Energy Raters of Massachusetts, Inc. Michael Browne, President. 2 Woodlawn Street, Amesbury, MA 01913 (978) 270.-3911 erm@energyratersma.com
- Center for EcoTechnology, Mark Newey, President 320 Riverside Dr, Unit 1A, Northampton, MA 01062 (413) 586-7350 x227, mark.newey@cetonline.org

The questions we asked are:

- 1) What is your typical scope of services for an average sized house?
- 2) How much do raters typically charge for this scope in your region?
- 3) How much might it add to the cost if the rater has to drive 2+ hours to get to a job?

Gwen St Sauveur (north of Burlington):

1) Typical Scope of Work

- a. Plan review: An in-depth review of your plans against the Energy Star Program requirements. With this in-depth review I could provide you a list of the essential specifics you should plan around to meet the Energy Star requirements. Items such as window U-value, equipment selections efficiencies, air-sealing measures etc.
- b. Energy Model: An energy model developed for your home as needed for Energy Star certification. The energy model would run your peak heating & cooling loads. These loads should be used for selecting your HVAC equipment. Energy Star is going to look at the size of your home vs the equipment you select, so it is ideal to select equipment that matches your building's load. I've found with the tighter assemblies & building materials of today the BTU/SF ball parks can be wildly inaccurate, which is why I believe Energy Star also requires energy models. Hours on a model are very specific to the home design and depend on software used and the purpose of the model. For example, a simple energy model for HERS takes less time than a complex model for sizing HVAC equipment.
- c. Energy Star Fieldwork & Paperwork: This will take about 16-20 hours for filling out, organizing photos, noting field findings & submitting for Energy Star certification there are a number of items that require photo documentation. Each of the items below need to be performed & documented by a HERS rater.
 - i. Mid- construction photos of insulation depths, materials & air-sealing measures verifying the final selections match that of the energy model.

- ii. Mid-construction blower-door test performed once the envelope is complete.
- iii. Late-construction verification & photo documentation of various items such as:
- iv. HVAC equipment model numbers & name plates
- v. kitchen & laundry appliance model numbers & name plates
- vi. LED lighting locations
- vii. programable thermostats
- viii. domestic hot water heater, distribution piping & low flow plumbing fixtures
- ix. field test ppm (parts per million) on any gas appliances
- x. Exhaust air flows from hoods and fans
- xi. Filter inspections for ventilation units
- xii. final window selections U-values and SHGC ratings
- xiii. photos of a handful of other similar items

All this gets submitted by the HERS rater to RESNET & Energy Star for certification.

2) **Typical cost for standard scope:** Below are BTF's current rates:

- a. HERS rating only \$1,800
- b. Energy Star Rating \$2,400
- c. Energy Star Multifamily Home Certification \$3,400
- d. Energy Start + Net Zero ZERH: \$3,400

Not all customers will require plan review or HVAC sizing review via independent energy model.

Some builders will already know if they are building to Energy Star requirements or not, saving the customer many hours of custom project review and additional energy modeling which can range widely -ie. 4 or 40 hours - depending on the project needs. Our current billing rate is \$135/hour. A recent project we quoted required plan review, an energy model and Energy Star certification. We quoted \$5,640 for the 1,800 sf home.

3) **Additional cost for travel:** Gwen charges her billable rate for travel.

Scott Fillingam (Montpelier):

- 1) **Typical scope of work:** I currently have a single client, a "large" developer in Vermont who builds five distinct models of single family homes (attached and detached). They are well accustomed to what it takes to meet RBES and their subcontractors provide quality work consistently. My goal is to offer support beyond what is typically provided in a rating. For example, I mark the trusses at the predrywall inspection so the sub installing the loose blown cellulose knows the depth necessary. While I don't commission the mechanical ventilation apparatus, I speak with the owners about the importance of that element of the house. I research incentives and material/method choices that can be advantageous.
- 2) **Typical cost for this scope of work:** The cost of these services is in the low four figure range.
- 3) **Additional cost for travel:** I don't make distance an issue, generally. I'm near Montpelier. My long term goal is to make New England the boundary of my service area. Clearly, travel is an expense, but that cost driver needs to be considered in the context of other factors. Volume is a big one. If a builder/developer, mortgage company or architect etc. is going to patronize my company with regularity then I will be inclined to absorb some of the travel expense. If it's a homeowner design/build project, then not so much.

Harrison Bush (Huntington):

- 1) **Typical scope of work:** I currently provide a number of different services including Efficiency Consulting and envelope testing for new construction with contractors and architects for CBES/RBES compliance, and for existing construction with homeowners in partnership with EVT and VGS WX programs. I am finalizing my full HERS rater certification but I have been providing regional field testing services for the BER group. I expect to provide full HERS rater services throughout the state shortly.
- 2) **Typical cost for this scope of work:** An initial construction document review for RBES compliance typically runs \$50/hr, and I would generate a short document outlining findings, questions, and red flags for followup. A full HERS rating and testing services will be in the \$1500-\$2000 range based on complexity, and jobsite distance, but I'm trying to refine the cost structure for multifamily and repeat clients.
- 3) **Additional cost for travel:** I will travel statewide - with a sliding mileage rate - but I predominantly operate in Champlain Valley, Central/Northern, and Connecticut River Valley areas (or effectively Rutland/Woodstock to the north borders).

Al Sularz (Burlington):

- 2) **Typical cost:** I charge \$1,500 for a HERS rating for a new construction single family home. This is a base price for a smaller starter home that only requires two visits. Price goes up if the house is more complicated to model. Additional visits and consulting time are extra.
- 3) **Travel:** I will do ratings anywhere in VT.

Ethan Goodkind (Essex Junction):

- 1) **Typical scope:** I have been a residential building inspector for 4 years, and I'm certified HERS and Energy Star. I have worked on over 70 projects. I do modeling, pre-drywall testing, blower door & final inspection with certificate and HERS score.
- 2) **Typical cost:** a standalone house might be \$1,500
- 3) **Typical travel:** beyond an hour, there is a charge.

Chris West – Eco Houses of Vermont (Jericho/Essex):

- 1) **Typical scope of work:** Providing full HERS services to private clients (site visits and office work), provide modeling services to HERS raters who prefer to do only field work (I specialize in energy modeling for PHIUS, and other programs as well so I'm primarily an energy modeler who does field testing too). Typical scope of work for a <3000 sq ft single family home: gathering all documentation in iterative communication with client, input data to software, two site visits (one pre drywall and one final for inspections) and advice /consulting about how to improve design based upon evidence based building science data. Also do HERS for Multifamily.
- 2) **Typical cost for this scope of work:** We charge \$150/hour for work. We see typical HERS ratings for typical (read simple) designs with few revisions and only two site visits at around \$2000 (clients who I have difficulty getting data from or who make numerous changes to the design will see higher costs). Houses further away, multifamily, etc will cost more. We are willing to do job pricing if the client understands the scope that the job pricing includes. Change orders in the work requested will result in increased charges. Charging an hourly rate is often cheaper for the client in the end than job pricing.
- 3) **Additional cost for travel:** I will travel statewide – and charge my hourly rate for travel.

Jim Bradley (Cambridge):

- 1) **Typical scope of work:** Providing full HERS services to private clients (site visits and office work), provide modeling services to HERS raters who prefer to do only field work (I specialize in energy modeling for PHIUS, and other programs as well so I'm primarily an energy modeler who does field testing too). Typical scope of work for a <3000 sq ft single family home: gathering all documentation in iterative communication with client, input data to software, two site visits (one pre drywall and one final for inspections) and advice /consulting about how to improve design based upon evidence based building science data. Also do HERS for Multifamily.
- 2) **Typical cost for this scope of work:** Typical HERS ratings for typical (read simple) designs with few revisions and only two site visits run \$1,500 - \$2000. Efficiency Vermont is willing to pay up to 50% or \$800 of the HERS rating if the contractor is in their RNC residential new construction program. Houses further away, multifamily, etc will cost more.
- 3) **Additional cost for travel:** I will travel statewide – and charge my hourly rate for travel.

Architect Sandra Vitzthum has used Alex Pakatar (Troy, NY) for a gut rehab/addition. The project is about 3 ½ hours from their office. The scope matched Gwen's. The cost was \$5,000.

Additional information provided:**(Gwen St Sauveur)**

- 1) **Training for HERS Rating :** It takes approx.150 - 200 hours scheduled out over several weeks. There are a minimum 3 exams and 5 simulations. There are additional exams to offer EnergyStar ratings on homes and multifamily projects as well as the Zero Energy Ready Certifications. It costs between \$2k-\$4k to become

certified. Then the \$5-10k in equipment costs. There are also fees, random audits and document filing requirements, and continuing education that HERs raters must meet annually.

- 2) **Builder handout to save time:** An easy-to-read list of the building requirements for Energy Star & the ZERH programs as well as EVT Certified 3.0 would be a handout to give to builders. This would save builders from having to hire folks for specific review of their home designs... they could do some of that leg work & decision making themselves! Also, it is especially easy to miss things such as insulation under the slab at the time of initial concrete pour – builders really need to know exactly what they need to do before construction starts.

(Scott Fillingham)

If the goal is to enforce the RBES for the sake of the external benefits residential energy efficiency provides then the cost of the service must be affordable for the bulk of the new homes being built. \$1500 is pushing it. Builders can simply hire someone qualified to do a blower door test and self-certify everything else, which is what is happening where code enforcement is lax. The HERS method of enforcement provides a certified, registered, third party record of what is actually happening onsite. It's a document the homeowner can use to prove the home is efficient should they decide to sell and consequently adds value to the home. That being said, there is the matter of proportion. I've not met a builder yet, and I've inspected homes for many of them here in Vermont, that wants to add anything to the final cost of construction that isn't tangible. As I mentioned before, I believe in the mission and I think the HERS method is the best tool for getting there but it has to be affordable.

(Ethan Goodkind)

Simplify RBES so it does not confuse people: (1) Make each package a completely separate form. (2) Use consistent terms with Ecotrope and other software, for instance "framed floor", "flat ceilings," "ceilings." (3) Minimize abbreviations. I believe in self-verification. VT should use the same code as neighboring states.