

# RESNET Quality Assurance Efforts

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# RESNET QA Team



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# DOE Study

## Lessons Learned:

- Blind studies of this type can introduce complications
- Hiring a rater after construction is complete is uncommon
- Specifying “projected” or “informational” rating means no QA
- Only final test/inspection and no pre-drywall doesn't follow the typical rating process
- Some findings clearly violate RESNET Standards
- Some findings involve interpretation differences
- Some findings are just human error



# Becoming a HERS Rater



RESNET's quality assurance oversight of HERS Raters begins while they are still candidates and lasts throughout their work as certified HERS Raters:



➤ All Rater candidates must accurately complete five probationary ratings overseen by a RESNET Candidate Field Assessor.

- ✔ At least **3** of the **5 probationary ratings** shall be accomplished using field verification of all rated features of the home, and completed in the presence of the Candidate Field Assessor.

# Annual QA Oversight



Once certified, the HERS Rater must undergo the following quality assurance oversight activities annually:

- ✔ **10 % of all homes rated** must be file reviewed by a certified RESNET Quality Assurance Designee.
  - A non-biased selection of homes is reviewed, accounting for new and existing homes, geographic location, builder, trade contractor, variety of floor plans, etc.
- ✔ **1% of all homes rated** must be field reviewed by a certified RESNET Quality Assurance Designee.
  - Each home selected for a QA field review for each HERS Rater shall be randomly selected from as many different builders and communities as possible.

# Annual QA Oversight

RESNET reviews **100% of Provider's annual QA reports** to ensure compliance with the RESNET Standards. RESNET conducts in-field and online QA reviews to ensure that **50% of all Rating Providers and their staff are evaluated and mentored annually** and real-time reviews are conducted via the RESNET Registry and QA Genie Program.

HERS Raters are governed by the RESNET Code of Ethics, Rating Standards of Practice, and Compliance Complaint Resolution Process.

✓ Non-compliance may **result in corrective and/or disciplinary actions** as required.

# QA Genie



# Purpose of QA Genie

## *Identify and Stop Bad Actors*

Accomplished through:

- Identifying outliers/anomalies (inputs outside normal bounds)
- Some Outliers are Hard-Coded
- Additional Detection of Outliers “in Cluster”
- Ratings are “flagged”





# Common Flags

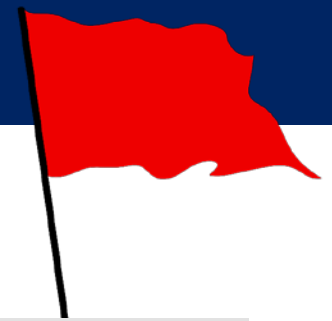
Ratings in  
One Day

Mech. Equip.  
Set to Default

No Window  
Overhangs

Wall Framing  
Factor

# Common RED Flags



Wall Framing Factor 


Duct LTO Testing Repeat Values 

Climate Zone 

Ventilation Fan Watts 

Blower Door Testing Repeat Values 

Window SHGC Value(s) 

Window Interior Shading 

Water Heater EF 

Sealed Attic Ceiling Area-to-Attic Exterior Ratio 

Water Heater EF 


Window-to-Wall Ratio 


Water Heater EF 

Refrigerator kWh/yr 

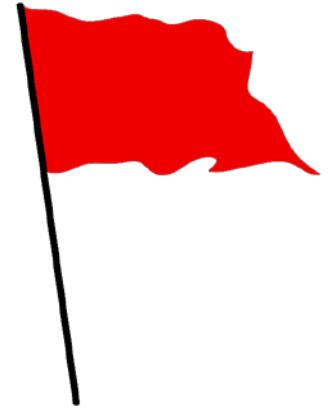
Door-to-Wall Ratio 

Door-to-Floor Ratio 

Window U-value(s) 

Furnace AFUE 

# Ratings Report- Example



	9,017	16.65%
	8,799	16.24%
	8,273	15.27%
	7,237	13.36%
	6,355	11.73%
	5,724	10.57%
	4,973	9.18%
	4,627	8.54%
	4,394	8.11%
	4,317	7.97%
	3,949	7.29%
	3,858	7.12%

# Evaluating Raters

Rater Name	Ratings	Flags/Rating	Red Flags/Rating
	3,364	3.41	0.47
	31	6.61	0.10
	1,025	4.75	0.25
	1,375	5.38	1.88
	95	5.16	0.52
	423	5.72	0.48
	416	9.30	2.76
	293	4.37	0.05
	215	5.42	0.41
	4	4.00	0.00

# Moving Forward

## **RESNET Board:**

- Approval of a Software Consistency Committee
- Use of QA Genie to uncover potential problem areas for field study

## **QA Staff:**

### **50% of Providers and their QADs will have enhanced RESNET QA Annually**

- 25% Online Review
- 25% In-Field Review

### **Train All QADs and Delegates**

- Quarterly Webinar Series

### **New Field/File QA Checklist**

### **Update QA Genie Outliers as Technology Changes**

### **Quarterly QA Review Tracking in the Registry**

# Potential RESNET-Funded Study

## **Three Parts to Evaluate:**

- Projected Ratings from Plans,
- Pre-drywall inspections,
- Final inspection and Confirmed Rating.

**Study would be run by an independent third party**

## **RESNET Board Decision:**

- This would require a significant investment to do it right
- Need to better define the problem with existing data/tools
- First- use QA Genie to evaluate potential problem areas, then do field study to evaluate those areas, if needed.

# Thank you!

## Questions?

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Setting the Standards for  
Home Energy Efficiency