RESNET Quality Assurance Efforts

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RESNET QA Team

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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

RESNET HERS® INDEX

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

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"
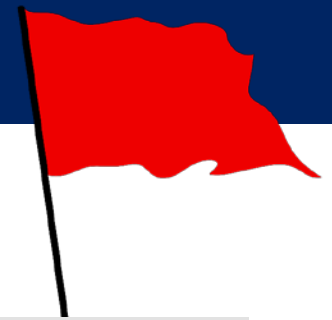
- Ratings are "flagged"

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

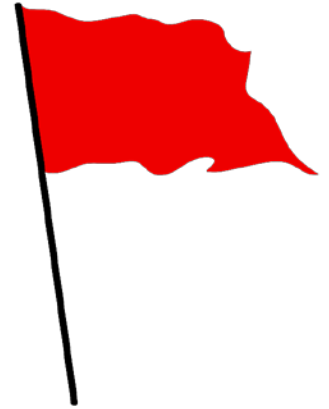Window-to-Wall Ratio

Water Heater EF

Refrigerator kWh/yr

Door-to-Wall Ratio

Door-to-Floor Ratio

Window U-value(s)

Furnace AFUE

	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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RESNET.
RESIDENTIAL ENERGY SERVICES NETWORK

Setting the **Standards** for
Home Energy Efficiency