

Dale,

Thank you for the opportunity for RESNET to comment on EPA's Proposed Home Performance with ENERGY STAR Program Changes.

RESNET has four general comments on the proposals.

The first is that a goal should be set of requiring that the analysis clearly recommending the homeowner reduce the home's energy consumption. Home Performance with ENERGY STAR should be a challenge to American home owners not just a process. It is clearly cost-effective to reduce a home's energy use by 20%. With the growing concern over global climate change the Environmental Protection Agency needs to make this clear call to action to homeowners.

With a specific challenge then a means must be used to calculate what the energy savings would result from making the improvements recommended by the analyst. The RESNET software procedures can calculate this and should be referred to. Home Home Performance Analysts will be required to be able to use a software program that can calculate the energy/carbon emission savings form improving the home's energy performance.

The report that goes to the homeowner should be required to state how the energy performance has been improved by making the improvements. This report can be calculated by a RESNET accredited software tool.

Finally, EPA should require that the analyst that completes the evaluation shall be a BPI/RESNET certified Building Performance Analyst.

The following are RESNET's specific comments:

P1

Page One

Lines 34 - 36 - How does EPA propose that the Sponsors will be able to track whether all of the jobs have been reported.

Line 37 - Suggest adding "or agent" after Program Sponsor

Page Two

Line 14 - Feedback in some form should be required, not just recommended

Line 21 - Program sponsor should also be required to implement a conflict-resolution mechanism

P3

Page Two -

Line 18 - "minimum elements" - In order to accommodate various business models, it would be useful to clarify that the requirements for detailed data collection (on thermal envelope component and window sizes, mechanical equipment detail, appliance detail, blower door testing, and duct leakage testing do not have to be completed at the initial assessment; this would be consistent with the statement in F.1.a that "Prior to installation of measures, perform diagnostic tests..." and also footnote (2) in section H. Many of the details on these items (windows, equipment, appliances) are not necessary if general recommendations for upgrades are provided under specific conditions.

Page Three

Line 14 - Occupant reported information on attic and wall insulation levels is so unreliable that it should not be included as a minimum requirement.

Page Four

Line 26 - D 1) e) - Replace "Draw" with Sketch. Replace "measure" with calculate floor areas. Replace "calculate air change" with ventilation air flow

Line - 51 D 2 ii) - Add two exceptions:

1. where direct evidence of outside moisture intrusion exists at existing vents, alter or remove vents that show evidence of moisture intrusion and do not add more.
2. Where existing or planned retrofit includes unvented roof design with cavity spray foam (cathedralized attic) or foam sheathing above roof deck (compact commercial type system).

Page 5

Line 11 - Reference to BPI Building Analyst Technical Standard, Section 2.2 is too specific, based on previous draft--section number may change. Reference should note both defaults and derated, "effective R-value" tables.

Line 20 - c) i) - General recommendations for maintenance or potential upgrades should be made as warranted, but detailed data on windows and doors should not be a minimum requirement. Estimating size and orientation does not add value if upgrades to windows are not in the work scope.

Line 32 - 4) a) Replace "a danger that dangerous" with evidence of exposed and/or friable.

Page 6

Lines 1 & 2 - iv) - Move this section to item #6 under "mechanical ventilation". First approach should be to require recommending whole-house ventilation per 62.2 table 4.1 or equation 4.1 in work scope (missing here). This does not require any blower door results at all. Second, ventilation credit or exemption. Don't even include BAS concept, will be phased out of BPI standard--if needed simply refer to "legacy approach during phase-out period" as determined by BPI. Don't refer to 62-1989, it does not apply to single-family homes.

Line 4 - ASHRAE 62-1989 was NOT 62.2

Line 18 - i) - Remove "(doesn't have to be during blower door test)"

Line 22 - ii) - Remove "(doesn't have to be during blower door test)"

Lines 26 - 30 - iii) - Move this paragraph, insert after 4.a.ii above as iii (renumber subsequent). Delete "best during blower door test".

Page 7

Line 10 - 3) a) - Capacity may be guessed by model, never efficiency (SEER/EER rarely on nameplate in any fashion). Use nameplate model number, require or recommend looking up in

ARI directory.

Lines 11 - 12 - b) - Replace "open exposure to sun" with recirculation/air flow obstruction from built features or plantings

Line 12 add "coil blockage from" before "leaves, twigs or other debris"

Line 13 add: d) Recommend testing charge and air flow on all AC systems.

Line 22 - 4) b) - Add another item -- inspect for condensation moisture or damage from condensation on exterior of duct liner (hot humid climate) or interior of A/C only ducts (cold climate) for ducts outside conditioned space.

Line 23 - b) i) - If this is only recommended, why set the limit at 20%--why have any limit?

Line 31 - ii) - Replace "whole duct pressurization" with plenum pressure-matching air flow

Line 32 - Replace "rise/drop" with split

Page 8

Line 15 - 6) d) - Add "extended operation using" before timer-operated exhaust fan

Line 15 - F. - Need to include gas leak, oven tests. Appliances that are replaced with direct-vent or power-vented equipment as part of the work scope do not need to be tested (per H.1.c. below). Should be stated up front in this section.

Line 35 - iii) - Specify annex H of NFPA 54

Line 36 - b) - Should be part of report if work is completed but not required on initial assessment.

Page 9

Lines 4 - 5 - 2) - Remove "and conditions that promote fungal growth"

Line 12 - 5) - Replace "dark" with "for discoloration on"

Lines 22 - 23 - H. 1) a) - Remove "It is required that the set of recommendations be reasonably comprehensive in" - This is hard to define and enforce.

Line 26 - b) - Remove "rough" before estimate. RESNET recommends that specific software calculations be completed to provide a more accurate calculation of projected energy savings and return of investment.

Line 28 - Remove "such as a simple payback". Simple payback expressions has long been the bane of energy efficiency. A sophisticated program such as Performance with ENERGY STAR Homes should not continue this.

Page 12 - Minimum Elements to be included in HPA Summary Reports

Line 24 - add "draft," before "spillage"

Line 35 - Revise sentence to read: "An estimate of energy savings from recommended improvements and improvement installation cost calculated by a RESNET accredited software

tool."

P5

Page One

Line 15 - add "issues that may be directly affected by the Home Performance work," after "health and safety"

Page 2

line 7 - These approaches should not be detailed here. Only a summary should be shown, with a reference to BPI standard, the HPA (P3) document, or both. Section 1.3 of P6, as an example, is more appropriate, although in some cases language that is specific to the purpose of test-out (and not encompassed in P3) needs to be included.

Page 3

Line 12 - Combustion Equipment Testing / Combustion Appliance Zone Testing

General comment on below items:

post-tests are for two reasons: to confirm pre-test action condition has been repaired, and/or pre-test non-action condition is re-confirmed after work. The detail should be in the pre-test requirements, not here. Cite BPI standards and/or HPA (P3) document. This document should only summarize, i.e. "repeat/confirm the following tests and inspections: ". If the contractor doesn't understand how to do these tests as named, and are supposed to learn through these justifications and detailed accounts at the close of the job, they shouldn't be in the program.

Line 16 - Replace "safety" with "operating"

Line 18 - "Draft" is not in draft Home Performance Analyst minimum standard but shouldn't be mandatory here if it isn't in the pre-test assessment.

Line 33 - No need for additional detail here.

Page 4

Line 19 - add "and plenum pressure matching," after "flow plate". Static pressure, temperature drop should be eliminated from test-out procedure because they are not quantitative; static pressure is too hard to measure accurately and temperature splits are too dependent on equipment charge/capacity.

Line 20 - "pass" or "fail" - according to what standard? Manufacturer's recommendations are probably too stringent to realistically reach in many cases--"pass" should recognize a significant improvement compared with a pre-test, and "failure" should be limited to systems that have reduced flow after duct sealing.

Line 25 - "Blower Door subtraction test, Delta Q, or pressure pan test" - recognized/approved by whom? - This needs to be defined

Line 27 - averaged?? how, and why??? This is too open-ended, and subject to interpretation.

Page 5 - Post-Installation Tests and Inspections - Needs to prominently display calculated

percentage of energy and tons of carbon emissions savings by making the improvements.

P6

Page Three

Line 38 - What are the specific procedures for performing a visual inspection of wall insulation levels? Need to be defined

Line 40 - What exactly is the goal of the visual mechanical inspection? Need to be defined.

Line 45 - What is the goal of the visual verification of lighting appliances and exhaust fans? Does this only apply when these have been installed with the scope of the Home Performance job?

Line 19 - This scoring system is confusing, inconsistent, and unworkable. There are a number of criteria in each "bin", but they don't align with each other -- some have very specific details and others are general statements -- and every one has both "yes" and "no" check marks. How do you grade someone, who has some "Yes" check marks in various scoring categories?.

This should be configured as a single list, with yes or no answers to specific questions or criteria. Numeric scores for value could be assigned to each item, either all on a positive scale, or some positive and some negative; then state a threshold for a total "score" that represents a "pass/fail" threshold. Some individual items can be flagged as dangerous and require immediate follow up with the contractor, regardless of score. Also, space needs to be included for recording details on specific situations that are generally outlined in many of these items.

Also, some specific items are ambiguous or not defined adequately: definitions of health/safety "failures" or "issues", equipment not installed "to manufacturer's specifications", "standard of insulation installation", "significant air leakage pathways"--all are too subjective to implement as stated. EPA should either define all these parameters more specifically, or point to a specific standard that does, or simply require sponsors to set standards for each point-evaluation item.

Line 25 - It should be a policy to have some regular feedback to contractors, regardless of "actionable" items.

P7

Page 1

Lines 28 - 29 - This should be emphasized in Q1 (QA summary) as well.

Page 2

Line 37 - This needs to be defined VERY clearly and specifically, and should be derived from referenced standards or refer to standards. I.e.: 200 PPM CO in living area or major gas leaks

Line 41 - Instructing the customer to abandon the site may be too extreme--require action based on specific situation, based on guidance in BPI standard (after all, QA inspectors should have same level of training and should be implementing the same protocol at the time). There's a bit of a possible issue if the safety threat was not caused by or even missed by the contractor--it's possible that some situation may occur that had nothing to do with the HPwES work, that is observed/measured during QA inspection--in which case the contractor is not necessarily responsible for repairing. In some cases responsibility may be disputed--need process for this (require program sponsor to establish process).

Lines 44 - 49 - The statement "If the customer is dissatisfied ..." requires agreement by the analyst that there is cause before corrective actions are required. There is a danger that because the analyst can be a client or employee of the contractor if forced to be the arbiter will because of self-interest will always find the contractor not at fault. Leave the corrective action determination to be based on any deficiencies found.

Page 4

Line 38 - Any disciplinary process such as this should also have a defined process for appeal, including mediation if necessary. Dispute resolution procedures (whether defined by EPA or by program sponsors) need to be in place at each key step in the process,

P8

Page 2

Lines 9 - 10 - Customers may be more likely to respond honestly to an anonymous survey. If the guidelines call for communicating survey concerns to contractors, it would require asking the customer to provide their identifying information, as well as the name of the contractor. We would suggest that surveys could be anonymous, but that customers are asked if they are ok with the sponsor sharing the results of their survey with the contractor, and if so, then the customer could be asked for the identifying information.

Again, RESNET appreciate the opportunity to offer comments on the proposed changes.

cc: RESNET Board

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