



Home Performance with ENERGY STAR Version 2

PROPOSED PROGRAM DESIGN

FREQUENTLY ASKED QUESTIONS (FAQ)

May 4, 2012



**U.S. DEPARTMENT OF
ENERGY**

The following questions and answers were developed based on preliminary stakeholder responses to the Department of Energy's proposed changes to the Home Performance with ENERGY STAR Program. The proposed program design was presented by Ely Jacobsohn at the Affordable Comfort National Conference in Baltimore on March 23, 2012. The full presentation along with a series of informational recorded webinars is currently available for review at:

http://www.energystar.gov/index.cfm?c=home_improvement.hm_improvement_hpwes_program_concept.

A live Q&A session open to all interested parties will be held via webinar on May 8, 2012. To register and participate in this live forum, go to <https://www1.gotomeeting.com/register/283143745>. This session will be recorded and posted to the Home Performance with ENERGY STAR web page listed above.

Public comments will continue to be collected online through Building America's PNL comment site: <http://buildingamerica.pnl.gov/forum.php> through May 31, 2012. Comments collected during this period will be used to inform the next iteration of the program design for Home Performance with ENERGY STAR Version 2 (HPwES v2).

Additional questions or correspondence may be sent to any of the Home Performance team members directly or to hp@sra.com.

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Section 1: General Program Design

Why is DOE changing Home Performance with ENERGY STAR? What is wrong with the current model?

The HPwES Program model has not changed significantly since its original launch in 2001. The proposed re-design of the Program is intended to address three fundamental issues:

- To provide clear expectations to consumers and contractors considering participating in the Program;
- To provide a more consistent set of standards that can be applied nationally across a wider range of regional program and funding paradigms; and
- To make the program more accessible to a broader range of participants and improve participation rates.

Why is DOE having two public comment periods and a pilot program prior to fully launching HPwES v2?

Because of the substantial changes being proposed to the HPwES Program, it is critical to provide stakeholders with ample opportunity to voice their concerns, provide constructive criticism, and suggest legitimate alternatives to the approaches being currently offered in HPwES v2. In addition, because some of the proposed components in HPwES v2 have not been implemented before or do not have a long track record, it is prudent to test them through pilots in different areas. It is hoped that this process of stakeholder engagement will result in a stronger, more successful HPwES Program.

How will HPwES v2 impact my existing business, program, state, etc.?

The re-designed program is intended to create new opportunities for a wider range of participants including Program Sponsors, contractors, and consumers. Local program rules may overlay the base HPwES v2 model.

While the intent is not to disrupt existing Sponsor and contractor operations, some adjustments may be necessary. One proposed change to the reporting process is a requirement to provide updated implementation plans on an annual basis. This will not necessarily require a re-submission of the entire plan, only a report indicating anything that may be changing in the coming year as well as a brief summary of the previous year's accomplishments and challenges. Additionally, local Program Sponsors may need to ensure that their minimum standards align with those described in the HPwES v2 base level and may need to re-tool data collection and reporting systems to meet the proposed Program requirements.

How much time will Sponsors and contractors have to transition to the HPwES v2 requirements?

Once the final HPwES v2 rules are announced, existing Program Sponsors will be allowed a transition period of no less than six months. However, Sponsors can begin the transition

process when the draft program requirements are released by reviewing their current Program structure and determining what will likely need to change and how. New Program Sponsors who enroll during the transition period will be expected to follow HPwES v2 rules upon enrollment.

Will the Century Club Contractor award continue to be awarded to contractors who complete 100 or more home performance improvements?

DOE anticipates that Century Club Awards will continue to be awarded, however it is possible that the requirements for the award could become more stringent such that there may be energy savings thresholds and/or criteria regarding the quality of work performed. Alternatively, HPwES can develop multiple award categories for: production, energy savings, quality of work, etc. DOE is also interested in pursuing options for recognizing contractors who have achieved a certain level of ongoing performance and/or who perform certain types of improvements (i.e. contractors who treat the house as a system and improve multiple components during a home performance improvement).

Section 2: Defining the “Paths”

How do the “systems paths” work?

With HPwES v2, DOE is suggesting an approach that continues to emphasize whole-house treatments; however, it also calls for a minimum requirement that HPwES projects complete a comprehensive improvement of at least one major system by meeting the criteria defined within that system’s path. The proposed HPwES v2 systems paths are designed to allow for flexibility in how a contractor or customer may approach a HPwES project. By aligning independent paths with common trades (*i.e.* HVAC Path for mechanical trades, Envelope Path for insulation trades) it is possible for a qualified contractor to bring HPwES to their customers even if they do not provide traditional whole-house services. However, a whole-house assessment, test-out, and health and safety inspections would still be required.

An additional requirement for a whole-house assessment with an asset rating ensures that homeowners will be given information regarding improvements that should be made to all the elements of the house. DOE envisions that participating and Charter Contractors should be able to explain the interactive effects recommended measures have on each other and provide homeowners with a prioritized list of improvements the homeowner should consider as they develop their home performance plan.

How do the “paths” described in HPwES v2 interact?

At a minimum, a HPwES project will be required to complete all base level improvements for at least one system in the home. Using this model, a homeowner may participate in the HPwES Program by completing either the HVAC Path or the Envelope Path. Homeowners striving for a higher level of performance may opt to combine the paths under a whole-house approach, and

may also complete recognition level improvements for either or both systems.

DOE envisions that the systems path approach will engage more contractors in the program and allow homeowners to invest in the system(s) of their choice according to their own timeline. For example, a homeowner who completes the HVAC Path can return at a later date to complete the Envelope Path and vice versa. This approach is meant to better align with how consumers make purchases of products and services for their homes. The minimum criteria apply across all projects and are designed to preserve the HPwES Program's foundational emphasis on building science based decisions.

Using this approach, Program Sponsors will be required to support an infrastructure with capacity to provide services within their markets under both paths. While a Sponsor may choose to focus its efforts and incentives on a single path, it is still the Sponsor's responsibility under HPwES v2 to ensure consumers have access to qualified contractors in trades representing both paths. This could be achieved through a variety of methods including partnering among Sponsors or other entities within a market, encouraging contractor-level trade alliances, or tapping into other market-specific resources.

Will there be a performance (*i.e.* modeled savings) path?

DOE will develop a performance path within the HPwES v2 Program design. In this context, program designs that rely on predicted energy savings as well as actual energy savings (as determined by post-retrofit utility billing data) are being considered. During the design phase that will follow the initial public comment period, DOE's Home Performance team will be working closely with industry to identify the best approach to a performance path including resources both internal and external to DOE that will help provide the basis for reliability analysis of predicted savings and collection, analysis, and validation of project data. Stakeholders with access to relevant analysis tools, data sets, or research findings that might help inform this process are encouraged to contact the team directly.

How would a Sponsor overlay their performance path and comply with the proposed HPwES v2 model?

The proposed HPwES v2 design does not currently include a requirement for meeting an energy savings performance threshold (*i.e.* minimum % energy savings.) Program Sponsors may overlay a performance metric at their own discretion as long as the base level specifications are met (with exceptions where the limits of construction prevent it.) For example, "ABC HPwES Sponsor" might require 20% energy savings with each home performance project. Their participating contractors would include in the work scope measures that would enable the HVAC and/or envelope system to reach the criteria outlined in the HPwES v2 base level as the starting point to achieve the 20% savings. The Sponsor will determine the tools and methodology by which the 20% energy savings will be measured and verified. Sponsors will retain the flexibility to rely on predicted energy savings modeled using locally approved software or calculation tools and methodologies. *However, as noted in the previous question,*

DOE is exploring options to explicitly include a performance path within HPwES v2 the details of which are to be determined in the next phase of re-design.

What does DOE mean by “performance path”?

A performance path can have a variety of definitions, however, regardless of how it is defined, the methods and tools used to follow the performance path would need to adhere to specific protocols and the minimum result of the path would be a minimum threshold related to energy savings, consumption, and/or quality. Homeowners and contractors would work together to determine the best plan for a home while complying with a Sponsor’s program requirements. Percent energy savings has been utilized as one method by which to define the performance path. DOE is interested in stakeholders’ concerns with setting a threshold at 10, 15, or 20 percent energy savings. DOE is also interested in understanding if that threshold should be consistent across the entire country or if it should change based on climate, market, and/or regulatory conditions.

What would be included in the basic assessment to ensure customers have enough information to make an informed decision?

With the proposed HPwES v2, the basic assessment would consist of a visual inspection, some basic measurements of the geometry of the home, and an evaluation of combustion safety. The data collected would be sufficient to complete the data entry for an asset rating and may be sufficient to determine the proposed scope of work for the project. DOE is leaving the timing of the work scope development – in terms of developing the work scope prior to or after conducting diagnostic tests – to the discretion of the contractor and Sponsor. The scope of work should include any measures that may be necessary to address minimum health and safety requirements to ensure conditions are not worsened after the home performance measures have been installed.

While not required at the time of the initial assessment, additional diagnostics to test-in and test-out the performance of measure installations are required during the implementation of the project as relevant to the scope of work. Additional diagnostics such as blower door or duct leakage tests may be added to the basic assessment at the Sponsor’s discretion.

What kind of equipment does the assessor need?

At a minimum, in addition to basic inspection equipment (ladders, flashlights, tape measures, etc.) the assessor will need to carry the equipment necessary to conduct a combustion safety evaluation in homes that have combustion appliances.

How will hydronic HVAC systems “fit” into the proposed HVAC Path?

The proposed HVAC Path is fundamentally the same regardless of fuel or distribution type. At the base level, the minimum specifications call for a comprehensive tune-up of the equipment which would be inclusive of furnaces, boilers, refrigerant-based systems, or any combination. At the recognition level, the heating and cooling plants would be replaced with high efficiency

equipment using quality installation standards.

In addition to verification that pipes are leak free and insulated in unconditioned spaces, distribution systems for hydronic and steam systems should be evaluated for compliance with current AHRI/IBR standards to ensure adequate radiation to the rooms being served.

DOE is interested in stakeholder feedback with regard to the HVAC base-level criteria for hydronic systems, specifically if there are appropriate measures (including controls, zoning, pumping equipment, *etc.*) that could be added to the criteria to bolster the final outcome of a home performance improvement with regard to the HVAC base-level criteria.

Section 3: Minimum Criteria and Specifications

How is cost-effectiveness determined?

The minimum standards and specifications described in HPwES v2 were determined based on existing consensus-based reference standards (IECC, ASHRAE, ACCA, *etc.*), ENERGY STAR products specifications, and building science best practices. Cost-effectiveness should be evaluated at the local level using calculation methodologies as required by local legislative statutes and regulatory orders.

In the design phase following the public comment period, DOE will be conducting detailed analysis regarding the homeowner costs and estimated energy savings of improvements in different climates and markets that follow the criteria outlined in HPwES v2.

What if my local cost-effectiveness rules conflict with DOE's minimum criteria?

Sponsors with regulatory and/or statutory requirements that conflict with the Sponsor's ability to comply with the base level standards as described in the proposed HPwES v2 design, should provide DOE with a description of the problem and possible recommended resolution(s). These conflicts will be taken into consideration during the HPwES v2 design phase that will follow the initial public comment period. All efforts will be made to ensure that the criteria adopted in HPwES v2 can comply with local regulatory constraints, including cost-effectiveness tests.

Have you considered how Sponsors incorporate various state codes with HPwES v2?

Sponsors with regulatory and/or statutory requirements which conflict with the Sponsor's ability to comply with the base level standards as described in the proposed HPwES v2 design, should provide DOE with a description of the problem and possible recommended resolution(s). These conflicts will be taken into consideration during the HPwES v2 design phase that will follow the initial public comment period.

How were the minimum specifications for the systems paths determined?

The specifications in the proposed HPwES v2 redesign were based on analysis of typical Mid-Atlantic region housing stock. The Program is seeking input on how these specifications should be modified to reflect the conditions in all regions and climate zones.

How will DOE determine which certifications are necessary for the contractors doing the assessment, overseeing work, and testing out?

DOE will use the job task analysis (JTA) completed under DOE's Guidelines for Home Energy Professionals to determine applicability of certifications for each job designation. Certification programs may be required to demonstrate competency in the knowledge, skills, and abilities defined by these JTA's. For more information on these guidelines visit:

http://www1.eere.energy.gov/wip/retrofit_guidelines.html

Will HVAC contractors be required to have HVAC-specific certifications to complete HVAC improvements?

Yes, in addition to all locally required licenses, mechanical contractors providing services under the HPwES v2 HVAC Path will be required to maintain relevant trade certifications. DOE is considering options such as NATE and NCI as potentially satisfying this requirement and invites comments from industry as to which certifications would be appropriate.

How does DOE intend to manage contractor certification?

DOE does not intend to actively manage contractor certifications. It is up to each Sponsor and/or Charter Contractor to ensure the certification requirements for HPwES v2 are met and to provide an implementation plan describing which certifications will be used and how they will ensure compliance among their participating contractor base.

Section 4: Recognition and Use of Labels

How will the Home Energy Score be used?

DOE's Home Energy Score is proposed to be used as one option for a standard asset rating tool for benchmarking pre- and post-improvement conditions in the home. At the recognition level, the proposed Program may require a minimum performance improvement to the Home Energy Score. For more information on the Home Energy Score visit:

<http://www1.eere.energy.gov/buildings/homeenergyscore/>

What will be labeled as ENERGY STAR in the proposed HPwES v2 Program?

The existing HPwES system labels the process that a contractor employs or a customer participates in. The proposed HPwES v2 creates an opportunity to offer a more tangible label that could be associated with the improvements, the systems, or the house. Stakeholders are encouraged to provide feedback to DOE regarding the value of a label and at what level the label should be applied. This label may or may not be branded with the ENERGY STAR logo

depending on its structure, criteria, and cost-effectiveness.

What will the recognition level actually result in for a homeowner? Are different options possible for the recognition level structure?

The current proposed HPwES v2 creates an opportunity to recognize HPwES projects that meet the recognition levels for improvements either for an individual system, or for the house itself. DOE invites industry feedback on the value of providing a recognition label as well as recommended methods to apply a labeling process for HPwES projects.

Section 5: Charter Contractors

If a Charter Contractor works in a sponsored territory, can they operate independently within that territory or are they required to work under the existing sponsor (guidelines)?

Any contractor doing work within a sponsored territory may only participate in HPwES through that Sponsor including compliance with all local program rules. Charter Contractors may provide services outside of Sponsored territories and still get their projects recognized as HPwES projects. Examples of locations where Charter Contractors would operate independent of a Sponsor would be in a municipal utility territory that is not covered by the existing local program, or in a region where no locally-sponsored HPwES program exists at all.

Where is the money going to come from to support Charter Contractors?

Charter Contractors will be required to engage the services of a third-party QA provider at their own cost. Similarly, marketing, training, certification, and other costs associated with startup and operation of a home performance business are the sole responsibility of the Charter Contractor.