



July 10, 2010

U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy (EE-1)
1000 Independence Avenue, SW
Washington, DC 20585

Attn: Jessica Balsam, National Energy Rating Program for Homes

RE: Comments regarding National Energy Rating Program for Homes Request for Information.

Dear Ms. Balsam,

On behalf of Northeast Energy Efficiency Partnerships (NEEP), thank you for the opportunity to provide input on DOE's June 8, 2010 release of the National Energy Rating Program for Homes (NERP or the Program) Request for Information (RFI).

NEEP is a regional nonprofit organization founded in 1996 whose mission is to promote the efficient use of energy in homes, buildings, and industry in New England, New York, and the Mid-Atlantic states through regionally coordinated programs and policies that increase the use of energy efficient products, services and practices, and help achieve a cleaner environment and a more reliable and affordable energy system.

NEEP's Northeast States Building Energy Codes Project, one of our oldest endeavors, aims to achieve significant energy savings in new construction, remodeling and renovations by advocating for strong building energy codes and code-related public policies, such as building energy rating and disclosure. NEEP has long used a system of advisory committees to help guide its work, including a diverse set of expert stakeholders that we work with on our Building Energy Codes Project. Similarly, NEEP's High Efficiency Home Performance Initiative, which works directly with the utilities and other efficiency program administrators to coordinate their efforts, is heavily involved in synthesizing myriad initiatives including Home Star, Recovery Through Retrofit, Home Performance with ENERGY STAR and NERP to harness them to enable rapid scaling up of home retrofit energy efficiency programs. NEEP, and its High Efficiency Home Performance working group, comprised of the administrators of ratepayer funded efficiency programs throughout the region, believe that NERP is a critical element to allowing virtually all of the residential retrofit initiatives underway or proposed to function synergistically rather to compete with and undermine one another.

NEEP would also like to highlight its involvement and thought leadership within the arena of building energy label programming by submitting the attached report as a guidance resource for the National Rating Program for Homes (the program): [*Valuing Energy Efficiency Through Disclosure and Upgrade Policies*](#). This report, among other things, calls for establishment of an asset rating and label that identifies cost-effective energy efficiency improvements to establish a common currency for multiple stakeholders to value energy efficiency.

GUIDING PRINCIPLES

NEEP commends DOE on the inclusion of the guiding principles but suggests that four more be added to optimize the program.



- First and foremost, the information should encourage installation of retrofit measures. We feel very strongly that in order for this information to encourage retrofit measures, that the building rating needs to include a comprehensive audit component, including the conduct of a blower door test. From my own personal experience, working many years ago as a contractor for ConnSave, a program in Connecticut designed to help consumers make decisions on energy savings retrofits, I was repeatedly disappointed when customers only chose to follow the minimum recommendations of the energy audit provided. Even though the homeowner would have benefitted from a more comprehensive evaluation of the homes energy losses only the item recommended by ConnSave were authorized and it was difficult to even recommend other energy saving improvements. It became evident to me that the lack of a more comprehensive audit preventing the consumer from being given or shown the information that would have prompted that more substantive retrofit. If this program is truly meant to “spur home energy improvements or retrofit,” NEEP suggests that only comprehensive energy audits will motivate consumer action to that end.
- Second, the information needs to be valuable not only to end users but also to other pertinent stakeholders; namely realtors, contractors, tax assessors, etc.
- Third, information needs to be relevant to financing entities because they represent a critical piece of the home retrofit puzzle
- Lastly, the Program should align with existing programs, systems and professionals.

In terms of other parts of the Program framework, NEEP would suggest the following:

SITE VS. SOURCE ENERGY

NEEP disagrees with DOE’s initial approach to use ‘source energy’ as the basic consumption metric on the label. Given the broad range of fuel sources between regions of the country, source energy may not accurately translate to the amount of energy consumed on an energy bill(s). If the label is to be “transparent and easy to understand” (see “guiding principles”) then the consumption listed on the label should more closely resemble what end users see on their energy bill(s). NEEP suggests that site energy be used as the consumption metric for the label and that a regional conversion factor be used to determine carbon emissions (see “greenhouse gas information”).

COST INFORMATION

NEEP agrees with DOE’s reasoning under “cost information” within the RFI to not include cost information as the label’s primary metric. However, NEEP also agrees with DOE that cost information is important and should therefore be included under an optional regionally customized section of the label based on modeled asset based site energy.

GREENHOUSE GAS INFORMATION

NEEP agrees with DOE’s thinking to not use greenhouse gas information as the primary program metric; however, NEEP suggest that carbon emissions, derived by a regional conversion factor through site energy (see “site vs. source energy”) be included on a regional or optional section of the label. Carbon emissions reductions are becoming a high priority for local, state and federal government(s) and therefore inclusion on the label will encourage reductions in carbon and show the link between home energy consumption and carbon emissions.



ASSET RATING VS OPERATIONAL RATING

NEEP agrees with DOE's initial approach that the rating should be "asset" based. NEEP believes that the National Energy Rating Program for Homes label should be utilized by the financial industry to qualify low interest loans and mortgages and therefore needs to be tied to the 'asset'. An 'operational' rating is not recommended because it is affected by variable end user habits or as occupants of a home change.

ADJUSTED ENERGY USE

See below *Physical Units Point Score or Energy Performance Bins*

PHYSICAL UNITS POINT SCORE OR ENERGY PERFORMANCE BINS

NEEP agrees with DOE's initial approach to use an 'absolute numeric scale' but suggests that a 'non-numeric' grading/binning system be overlaid based on region and number of bedrooms so that end users can better understand how the home's efficiency compares to others in the region of similar assumed occupants. Further, to account for a range of fuel sources, NEEP suggests that the units of the absolute metric be converted into British Thermal Units (BTU) to provide ease of comparison across fuel mixes.

A graded or binned system is important to qualify the given absolute metric since some scales such as the Home Energy Rating System (HERS) score do not represent a linear progression of improvement; i.e. an "A" on the HERS index may be "0-50" while a "B" may be "51-80".

POINTS OF COMPARISON AND BENCHMARKS

NEEP suggests that the rating be an 'efficiency rating' as defined in the RFI based on "energy use per home with X number of bedrooms" and within region Y. If the label is to provide usable data for comparison shoppers to compare like-homes, then number of bedrooms and region should be used as proxies for number of occupants and climate. Further, use of 'number of bedrooms' avoids the bias in favor of larger homes seen in a per square footage energy intensity type efficiency rating. Also, number of bedrooms is a readily available metric via tax assessor records and Multiple Listing Service listings.

The new-home benchmark should be based on a home that meets (but does not exceed) either the current IECC model energy code for that climate zone, or the actual state (or local) building energy code - whichever is more stringent. The graded/binning element of the rating should then be determined by region and number of bedrooms to optimize comparison between homes (see above within "scales and reference points").

RECOMMENDED ENERGY EFFICIENCY IMPROVEMENTS

NEEP suggests that recommendations for energy efficient upgrades be provided on the label within a regionally customized portion of the label. Such recommendations would be valid and utilized directly by programs such as Home Star and Home Performance with ENERGY STAR. This perspective explicitly supports NEEP's strong view that the Program should support comprehensive retrofit measures by encouraging end-users to pursue local retrofit channels (i.e., workforce and programs) and not distract



from or provide a replacement for such local resources. Only a comprehensive audit can give the totality of stakeholders upon whom execution of comprehensive retrofits depends (including homeowners, contractors and financiers for example) the necessary information to make an informed decision on the energy efficient improvements required to make their home as energy efficient as possible.

PRESENTING INFORMATION TO THE CONSUMER

NEEP suggests that the program include projected energy or cost reductions as part of the label and information presented to end users, but do so using regionalized information and clearly disclaiming the projections as representative of a typical situation and that each individual home and its operation necessarily will yield different actual savings. This information, coupled with the presentation of recommended improvements, will serve to drive consumers to pursue the efficiency improvements regardless of whether the rating is generated as part of an efficiency program or a policy mandate such as time of transaction requirements. At the same time such information would create the “common currency” for energy efficiency that is critically important to this endeavor.

NATIONAL HOME ENERGY REGISTRY

NEEP strongly supports DOE’s idea to create a national registry for data accumulated through the National Energy Rating Program for Homes to better understand the nation’s building stock energy use and to more accurately determine benchmarking practices.

QUALITY ASSURANCE

The requirements for home professions and audit tools will depend on the final program design. To that end NEEP suggests that DOE consider existing certification platforms as a requirement for professionals to participate in the program. Similarly, NEEP suggests that existing audit tools, probably with modification, be qualified to produce the label’s metric(s). NEEP suggests that DOE examine quality assurance, contractor audit, and third party verification practices as outlined in the ENERGY STAR for Homes, Home Performance with ENERGY STAR and Weatherization Assistance program requirements.

NEEP also strongly suggests that professional certifications consider and align with existing channels so that existing credentialed professionals are not required to receive extensive additional training and certification. Recognizing that the existing credentialing platforms that focus on energy include those related to the Home Energy Rating System (HERS), Building Performance Institute (BPI) and Weatherization Assistance Program (WAP), this approach suggests establishment of some common core requirements and yet maintains the viability and differentiation of existing platforms¹.

OTHER ISSUES

In terms of scope, NEEP suggests that the Program include all dwellings under the International Residential Code (IRC) as well as apartment buildings covered under the residential (low rise residential) and commercial (high rise residential) sections of the IECC (International Energy Conservation Code). All of the above dwelling types consume energy through residential end uses and therefore should be labeled under the Program. NEEP suggests that DOE perform further research to

¹ NEEP excludes the US Green Building Council’s LEED program from this list because, although inclusive of energy, it does not demand energy efficiency improvements and allows alternate paths to satisfaction of its broader sustainability objectives.



determine whether two separate label designs are necessary to capture this range of building classes given the following distinctions.

The IRC includes one and two-family homes and townhouses. These classes of dwellings have similar building requirements and are typically owner occupied.

Apartment buildings with three stories or less are covered by the residential portion of the IECC while apartment buildings with four or more stories are covered under the commercial portion of the IECC. These buildings include a large portion of the residential housing stock but are **not** owner occupied. The vintage and condition of these dwellings present a large source of energy efficiency.

CONCLUSION

In conclusion, NEEP again extends its thanks to DOE for offering this opportunity to share our comments on the National Energy Rating Program for Homes and we look forward to continuing our partnership with DOE to help drive demand and awareness for energy efficiency through a nationally recognized building energy rating and labeling program.

Sincerely,

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