



Commercial Building Asset Rating Program – Request for Information

9/22/2011

**Docket Number:** EERE-2011-BT-NOA-0049

U.S. Department of Energy (DOE)  
Building Technologies Program, Mailstop EE-2J  
Revisions to Energy Efficiency Enforcement Regulations  
1000 Independence Avenue, SW  
Washington, DC 20585-0121  
Attn: Ms. Brenda Edwards

**Subject:** Comments regarding DOE’s Commercial Building Asset Rating Program

Dear Ms. Edwards,

On behalf of Northeast Energy Efficiency Partnerships (NEEP),<sup>1</sup> thank you for the opportunity to provide input on DOE’s August 8, 2011 release of the National Asset Rating Program for Commercial Buildings (AR Program) Request for Information (RFI).

NEEP is a regional nonprofit organization that works to accelerate the efficient use of energy in homes, buildings and industry in the Northeast and the Mid-Atlantic. We are committed to this work because saving energy creates a stronger economy, a cleaner environment and a more reliable and affordable energy system.

NEEP’s Northeast Building Energy Codes Project, one of NEEP’s oldest endeavors, aims to achieve significant energy savings and greenhouse gas reductions in new construction, remodeling and renovations by advocating for advanced 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, which often includes directly partnering with the utilities in our region and other efficiency program administrators to coordinate collective efforts and ongoing initiatives.

For the last four years, [NEEP](#) has worked to help states in the Northeast and Mid-Atlantic realize the high impact savings potential of building energy rating and disclosure policies. We were pleased to see NEEP’s report on [Valuing Building Energy Efficiency through Disclosure and Upgrade Policies](#) referenced in the RFI on page 48155. NEEP’s report, among other things, calls for establishment of an asset rating and label that can help establish a common currency for multiple stakeholders to value energy efficiency, and, therefore, drive cost-effective energy efficiency improvements in buildings.

The DOE’s proposed National AR Program has the potential to drive energy efficiency retrofits in existing commercial buildings and send the appropriate market signals, thus transforming the market to value and secure significant energy savings. NEEP strongly believes that the AR Program is most likely to succeed if DOE focuses on designing a program model that is easily adoptable by states and local governments and, above all, that is as cost-effective as possible to implement.

---

<sup>1</sup> These comments are offered by NEEP staff and do not necessarily represent the view of NEEP’s Board of Directors, sponsors or funders.



While NEEP is in agreement with many of the initial approaches outlined in the DOE's RFI, we are appreciative of the opportunity to provide the following specific comments as DOE continues to develop its framework for a successful Commercial Building Asset Rating Program. These comments have been vetted by several members of NEEP's Regional Building Energy Codes Working Group, including energy efficiency program administrators and state energy and/or code offices, and their feedback has been incorporated herein.

## MARKET NEEDS AND GUIDING PRINCIPLES

NEEP commends DOE for establishing within the RFI's Guiding Principles that "the primary goal of the AR Program is to spur commercial building energy improvements in construction and/or retrofits."

In order to overcome market barriers and motivate capital investment for retrofits and enhanced building energy efficiency, NEEP agrees with DOE on the need to communicate energy and cost savings to owners, buyers, renters, investors, financiers, and others who have the ability to influence markets. Such information will serve to place a market value on building energy performance, thus prompting either appropriate price signals (rents, sales prices) or asset and operational improvements (retrofits, operations and maintenance training and strategies).

To communicate that information most effectively and meaningfully, NEEP strongly recommends that both scheduled and triggered ("time of sale/rent") disclosure policies be implemented as part of a commercial building rating program. Both have significant potential to influence and reinforce the market for building energy efficiency and retrofits:

**Time of Sale Triggers** - When selling or leasing space in a building, owners must disclose a valid energy rating to potential buyers or renters indicating current performance and potential improvements. Armed with this information potential buyers or renters will signal their preferences for energy efficient properties, in turn enabling markets to value energy performance and providing a greater return on investment for projects that improve energy efficiency.

**Scheduled Disclosure** - Commercial building owners must obtain a standardized rating indicating the building's annual *and* operational performance enabling owners and building managers to institute continuous improvement practices, benchmark performance against other buildings and establish performance targets in their annual plans. Policies may require ratings to be displayed prominently or reported in a publicly accessible database (see "National Building Asset Rating Database"), providing markets with regularly updated and relevant information.

## TARGET AUDIENCES AND BUILDING TYPES

NEEP is happy to see the AR Program aimed at variety of stakeholders and would like to see that list extended to include other pertinent stakeholders such as financial lenders, commercial real estate brokers and other professionals involved in real estate transactions, contractors, the insurance industry, and tax assessors, ensuring that the value and relevance of building energy rating and disclosure is conveyed throughout the entire market.

In terms of scope, NEEP agrees with the Program's choice of building types but would suggest that it also include all residential dwellings **not covered** within the International Residential Code (IRC); namely public housing.



## BASIC METRICS

### *Energy Metric - Source or Site Energy*

NEEP disagrees with DOE's initial approach to use 'source energy' as the basic energy metric for Asset Rating. NEEP suggests that site energy be used as the energy metric for the Asset Rating and that a regional conversion factor be used to determine carbon emissions (see "greenhouse gas metric" below).

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 Asset Rating should more closely resemble what end users see on their energy bill(s).

Kathleen Hogan, at the November 2010 inaugural Efficiency and Renewables Advisory Committee (ERAC) meeting, pointed out three major barriers to ongoing commercial energy retrofit efforts:

- 1) **Information** - Need access to straightforward and reliable information.
- 2) **Financing** - Need access to financing to pursue investments in energy efficiency.
- 3) **New Delivery Models** - Need retrofit programs with faster uptake / lower transaction costs.

Electing site energy over source energy addresses these three identified barriers in the following way:

- 1) **Information** - Whereas source energy includes energy consumed on site in addition to energy consumed during generation and transmission, site energy represents the most straightforward interpretation of energy use that a consumer can most intuitively understand and impact, similar to reading and interpreting a utility bill and reacting accordingly to it.
- 2) **Financing** - Whereas a financial institution would be less interested in the efficiency of the power plant or what generation mix is feeding into a building's energy use (all factors of source energy), a financial institution would be very interested in knowing how much it costs to operate a particular building. Financial institutions would favor site energy in order to make more informed lending decisions based off of direct building energy performance cost information.
- 3) **New Delivery Models** - Retrofit programs offered by utilities and other efficiency program administrators are often held to strict measurement standards by their regulatory utility commissions requiring detailed energy savings data that is more accurately drawn from site energy use data, not source data. If one of DOE's long term goals is to achieve significant cost savings and energy reductions via retrofit programs, then requiring site energy rating information should be encouraged.

Additionally, if the DOE's goal is to create a motivational tool for consumers that will inspire by informing them of the *real cost* of operating a building now and the potential cost savings that can be realized with retrofits, then again, site over source energy most accurately reflects the *real cost* of a building's operation and would be what consumers read on their utility bills.

### *Cost Metric and Greenhouse Gas Metric*

NEEP agrees with DOE's reasoning under "Cost Metric" within the RFI to not include cost information as the Program's primary metric, as cost alone cannot guide a building owners' investment decisions, and pricing is relatively volatile over time. Nor is a cost metric sufficient to be used in judging building energy performance. NEEP also agrees with DOE's thinking to not use greenhouse gas (GHG) information as the primary program metric. However, NEEP also agrees with DOE that cost information and GHG information is important, and a priority to consumers; therefore, both should be included



under a regionally customized section of the Asset Rating; GHG emissions can be derived using a regional conversion factor through site energy. Furthermore, inclusion of GHG information on the Asset Rating will encourage GHG emissions reductions as it raises awareness and demonstrates the linkage between energy consumption and carbon emissions. As noted by one of our Working Group reviewers, Ian Finlayson (MA DOER), with whom NEEP concurs, in many ways a GHG emissions metric represents similar information to a source energy rating, but represents the impact of building energy use on the broader environment (an output), whereas source energy represents the energy demand as an input. We believe the GHG emissions will have greater resonance and motivational value to drive energy upgrades, and would have material value in the event of a regional or national price on carbon.

## RATING METHODS

NEEP does not doubt DOE's point that using a detailed modeling approach to formulate an asset rating allows for greater flexibility and accuracy compared to other energy modeling tools. However, NEEP's concern is that a detailed modeling approach requires so much additional development time and likely also requires the use of professional building energy modeler that it would be too costly to implement in many scenarios, namely by local government entities operating under budget constraints.

## RATING SCALES

### *Numeric Scale Converting Physical Units into Score System*

NEEP agrees with DOE's initial approach to use a physical units scale, accompanied by a numeric interval scale but suggests that a categorical grading/binning system be overlaid based on region and building usage so that end users can better understand how the building's efficiency compares to others in the region. 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."

NEEP fully supports the DOE's intention to incorporate additional information such as a reference point to help users understand how their building score compares to a chosen energy code and additional information on a building's associated greenhouse gas emissions.

## NATIONAL BUILDING ASSET RATING DATABASE

NEEP strongly supports DOE's idea to create a national building Asset Rating database to track Asset Ratings, ensure rating legitimacy, and to better understand the nation's building stock energy use.

However, NEEP believes that both asset and operational ratings should be tracked for commercial buildings. Asset ratings are generally more useful for buyers/renters, since they want to compare buildings that will change occupants (and thus occupancy patterns and consumption habits). Operational ratings are more useful for scheduled disclosure, because they allow the real performance of a given commercial building's owner/operator to be measured over time, enabling continuous improvements. It is NEEP's opinion that asset ratings should be valid for 5-10 years and be disclosed to prospective buyers and renters; operational ratings should be renewed annually and be displayed in the building (where applicable) and loaded into the publicly-available National Building Asset Rating database.



## QUALITY ASSURANCE

### *Third-Party Verification*

NEEP agrees that third-party verification can be an effective way to ensure program quality and suggests that DOE consider existing certification platforms as a requirement for professionals to participate in the Program. NEEP would also agree with DOE's initial approach to establish verification standards and approve qualified third-party organizations.

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 there are existing credentialing platforms that focus on energy (such as COMNET), this approach suggests establishment of some common core requirements and yet maintains the viability and differentiation of existing platforms<sup>2</sup>.

### *Other Issues*

NEEP believes that any rating system is only as good as its components and therefore the AR Program should account for the full range of building types and building elements. The DOE might consider reporting specific building information in a disaggregated way on a label in order to promote transparency and better guide energy efficiency upgrade decisions, much like how a "Nutrition Facts" label disaggregates energy in food by fats, sugars, proteins, etc.

## CONCLUSION

In conclusion, NEEP again extends its thanks to DOE for this opportunity to share our comments on the National Asset Rating Program for Commercial Buildings. It is NEEP's firm belief that building energy rating disclosure policies can be effective in getting markets to value energy efficiency, and act as a powerful complement to more conventional incentive programs. NEEP looks forward to continuing our partnership with DOE to help drive demand and awareness for energy efficiency through a nationally recognized building energy rating and disclosure program.

Sincerely,

Carolyn Sarno  
Senior Program Manager, High Performance Buildings  
NEEP (Northeast Energy Efficiency Partnerships)  
781-860-9177 ext. 119  
[csarno@neep.org](mailto:csarno@neep.org)

---

<sup>2</sup> NEEP would exclude the US Green Building Council's LEED program as a potential platform because, although inclusive of energy, it does not demand energy efficiency improvements and allows alternate paths to satisfaction of its broader sustainability objectives.