



July 28, 2010

Re: Docket number EERE-2010-BT-BC-0012

Please accept the following comments on behalf of Northeast Energy Efficiency Partnerships (NEEP) in response to the Department's Request for Information related to Docket EERE-2010-BT-BC-0012, Building Energy Codes.

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 aims to achieve significant energy savings in new construction, remodeling and renovations through up-to-date building energy codes that meet or exceed national model energy code requirements. The project also strives to attain a high level of energy code compliance (at least 90 percent or better) in Northeast states.

*(1) Problems, issues, and barriers to the adoption, implementation, enforcement, and improved compliance with improved building energy codes.*

In NEEP's view, there are several problems or barriers to improved code compliance that need to be addressed, but the overarching barrier to improved code compliance is a lack of self-sustaining funding in the states to address these problems.

Should states be able to realize steady and increased funding they would be able to more adequately address the number of contributing issues, which include:

1. Opposition from *status quo* lobbying groups that must be refuted with sound economic data; also state agencies need to address issues of overlapping jurisdiction when it comes to code adoption. State agencies will often find themselves in conflict when adoptions need to cross multiple jurisdictions within state government, and the agencies don't consult with each other on adoption processes or strategies for dealing with opposition. Direction needs to come from above - either through legislative mandate or a directive from a governor - which the various agencies with jurisdiction over code adoption need to come together in a coordinated fashion to avoid a fractured effort and allow for the best chance to overcome opposition to new code adoption.
2. Existing state laws that conflict with model code provisions are on the books in many jurisdictions, and have insufficient priority to warrant legislative consideration. These outdated laws are often extremely difficult to remove. As a result, the code adoption process can be unnecessarily delayed until the regulations can be deemed "statutorily sufficient."
3. A lack of integrated inspection checklists available to code officials that could simplify the workload and reduce record-keeping, allowing them to focus on enforcement.
4. Lack of training directed toward buildings trades professionals on code changes to enhance their understanding of compliance and options.

*(2) Training needed for designers, builders, code officials, owners, and others to support upgraded codes to meet Standard 90.1 2007 (or code that achieves equivalent or greater energy savings) for*



*commercial buildings and the 2009 IECC (or code that achieves equivalent or greater energy savings) for residential buildings. Training and assistance needed to develop and implement a plan to achieve compliance with upgraded codes by 2017.*

1. Training needs to focus on the contractors and installers. In the past we have trained the Building Officials in a new code and they have served as the only trainers for the industry.
2. With limited resources and a lack of policy priority from state and/or local officials, energy codes have almost always been at the bottom of the enforcers' list. Consequently they have not achieved the level of compliance we would expect.
3. Minimum standards of competency need to be set for all energy inspectors. Taking a class is not enough. Tests must be given to verify that the material is understood so that knowledge can be transferred to competent inspections in the field. This applies to both existing building officials as well as third party inspectors.
4. Suppliers and lumberyards have seldom been brought into the education loop. Training in what materials are need to comply with code could eliminate non-compliant products from being sold. For instance in Maine at a public hearing on the energy code the contractors complained they could not buy R- 21 insulation. When they suppliers were asked why it was not stocked there response was they did not know it was required.
5. Training needs to focus on "parts" of a building. Some contractors take a job from start to finish but many "trades" are involved in specific areas of the building that involve specific energy requirements. Breaking the training into areas of influence could elevate the individual installers' competency. Training on just insulating concrete basements and crawl spaces in one class would focus on the materials and processes used in that area of the trades. Teaching exterior wood and steel walls could be another and roofing a third.
6. Code Officials need to be taught what the code requires but they also need to know the reason "why." Just saying you need R19 in the floor is not enough. The whole concept of what makes a good complete building thermal envelope, including air barriers, needs to be understood.
7. Required training needs to focus most acutely on:
  - a. trades and builders;
  - b. design professionals;
  - c. code officials and subordinates;
  - d. real estate industry professionals, including loan officers;
  - e. building energy raters.
8. The present system relies on training the code officials and expecting that knowledge to be passed along by them to the first three groups involved in the construction process (the raters already have required training).
9. Planning for 90 percent compliance has to be long range with definite intermediate achievable goals. We can't reasonably expect that compliance can be achieved in the last 18 months.

*(3) Processes, information, materials and tools necessary to upgrade building Energy Standard for Buildings Except Low-Rise Residential Buildings (or equivalent) for commercial buildings and the 2009 International Energy Conservation Code (or equivalent) for residential buildings. Information, materials, and tools necessary to develop and implement a plan to achieve 90-percent compliance with upgraded codes by 2017.*

1. The construction codes need to be adopted as the comprehensive, unified set of complementary requirements that they are intended to be, not as "boutique" codes. Adoption in pieces, particularly in many states where jurisdiction over the separate codes is fragmented, creates internal conflicts with requirements modified or relocated in the model code process, often leading to "...the most restrictive shall apply" (which, in our opinion, is a solution that



avoids responsibility by transferring the responsibility to the designers, contractors and code enforcement officials to work out). Participation in the model codes by the stakeholders is essential to sharing the knowledge (and wisdom) from the field into the creation of new and modified requirements for future codes.

2. There are few "Best Practices" workbooks that discuss the problems of adoption and fragmented jurisdictions, or the related problem of poorly researched legislative modification of technical code requirements. Both factors contribute to delays in upgrading codes.
3. Building energy codes also suffer from a lack of detailed commentaries that correlate the basic building science principles with the specific code requirements. This is critical information to bring understanding to trades and designers about how old "tried and true" practices that worked with leaky, poorly insulated dwellings no longer provide protection against water and mold damages when the dwelling construction attempts to eliminate the air and thermal leaks that waste essential energy.
4. The "plan" to achieve 90 percent compliance needs to bring the education and adoption components together where they can effectively assure the new construction methods and practices that will achieve these results on a consistent basis.

*(4) Assistance and resources available from stakeholders, states, local jurisdictions, and others.*

1. The stakeholders need to assure that there is a consistent, reliable and self-sustaining revenue source to fund the creation and maintenance of education, training, tools development, and participation in the model codes adoption processes.
2. Some States have no enforcement mechanism in place even for building permitting and inspections. In these States a how-to model for implementing code compliance needs to be developed by DOE. This would include minimum knowledge and training for inspectors. Inspection Department job descriptions and flow chart for implementation.
3. Code Books for the State and local enforcement agencies need to be provided by DOE. This would include code commentaries as well as any other background material need to set up a comprehensive resource library.
4. Local jurisdictions need to support the authority having jurisdiction (AHJ) in participating in training (even if it means crossing a state line or more extensive travel).
5. Compliance can only be gained if training starts with the individual building contractor performing the work in the field.
6. Support for complete compliance inspections needs to start at the state level and be reinforced at the local level. Too many AHJ's who will be required to perform the inspections are understaffed. Without adequate funding the inspections will not be done and 90 percent compliance will never be reached.
7. Eliminate all past energy codes from RESCheck/COMCheck software (they can be archived), leaving builders with the sole option package that complies with the 2009 IECC or 90.1-2007 ASHRAE. Training tools should not be made available if they don't match with the latest code compliance requirements. This is particularly important given the code requirements in ARRA.
8. HUD Section 8 and FHA mortgage programs should be pushed to add energy efficiency/building energy code compliance criteria to their selection processes of who gets to rent their apartment to the Section 8 client, and who qualifies for FHA guaranteed loans.
9. States need to be rewarded for instigating sound training and inspection programs. Compliance for any program should be tested in the field on the finished product whether it is a commercial building or a single family dwelling.
10. States that fail to implement reasonable training and enforcement programs should be penalized in some way by DOE. Without a carrot to reward superior compliance and a penalty



for ignoring minimum levels of compliance, States will never reach the 90 percent compliance mandated by DOE.

Thank you for this opportunity to provide comment. Please do not hesitate to contact me should you require any additional information regarding these comments or on Northeast Energy Efficiency Partnerships.

Sincerely,

Mark Tebbets, MCP  
Building Energy Codes Project Manager