

## **To Amend or Not Amend National Model Energy Codes and Standards**

The purpose of this brief is to provide a discussion related to amending or not amending national model codes and standards when adopting them at the federal, state, or local level. It was considered necessary based on the significant amendment activity related to energy code adoption and the observation that in almost every case mistakes are made—some as significant as inadvertently excluding key building types from the code. In some cases, governing bodies will opt to amend with the goal of increasing energy savings; this is positive, and it is necessary to have states that are trendsetters with regard to efficiency. However, it is sometimes possible for amendment activities to yield the opposite result because of increased debate about the technical provisions and the “islanding” of jurisdictions with respect to the support infrastructure available for implementation and compliance with the model codes and standards.

### **General Guidance**

In the broadest terms, it is important not to amend unless there is some significant and documented reason the base document will not work in a given situation, and in such a case, only amend that which is necessary to address the situation. Considerable time and effort supported the deliberations and analysis that served as the basis for the model code or standard—this work is not easily repeated and can often be compromised through amendment. Consider the amount of time and resources it takes to develop and foster amendments through the process. Why duplicate it hundreds of times when a fraction of those resources could be applied at the national level? Consider the resources that it will take to support the amendments when implementing the code, including providing code interpretations, training, professional certification, commentary, and other support entailed by the changes.

The policy of the U.S. Department of Energy (DOE) Energy Efficiency and Renewable Energy (EERE) Office of Building Technologies is to recommend that states, if so inclined, make "good amendments properly." It is recognized that states are required to update their energy codes to meet or exceed the latest model code. States may develop their own codes, or adopt the model codes with or without amendments. DOE does not officially direct the states which codes to adopt or how to adopt these codes. DOE is, however, required to provide technical assistance to states. In this context, DOE provides the following general guidance:

- Use the model energy codes.
- The model codes have had a tremendous amount of good, national peer review.
- The model codes are good, but no document is perfect.
- Carefully consider the implications before amending the model codes, and only do so for sound technical or policy reasons.
- Exercise caution when amending the model codes, and seek technical assistance from DOE.

At times, amendments are necessary to address building types like greenhouses or other uncommon buildings that are not well addressed by the national documents (e.g., inflatable domes for tennis courts or football fields). In some cases, a particular construction type needs



additional provisions (e.g., straw bale or log construction). In other cases, it is important—for a number of reasons—to resist the urge to amend. Generally, these cases involve a proposed amendment that is intended to insert an item into the code that was not successful at the national level, or remove an item that was successful.

### **Specific Considerations**

If a jurisdiction must amend—or entities are pushing for amendment of the model code—the following guidance should be considered:

1. Beware of language allowing local adoption of a code that is deemed equivalent to the state adopted code. This can create confusion as to what is more stringent or equivalent and how to determine (analysis) the baseline to prove otherwise.
2. Amendments can void the application and use of specific and acceptable compliance tools, or render the tools unusable without significant and costly amendment. Worse, these off-the-shelf tools would continue to be used even though they do not mirror the adopted code.
3. Look at the history of proposed amendments at the national level. Has the proposed change already been proposed and defeated at the national level? Was there a good reason for that defeat? If so, consider carefully whether there is a viable reason to propose it at the state or local level.
4. Realize that you can always make an energy code more or less stringent by raising or lowering a number. It is important to examine the justification for making the change. Life-cycle cost (LCC) impacts should be examined in addition to first costs. If LCC was the basis for the energy code, this analysis should hold true for the state and/or local conditions.
5. Consider the base document and how it is to be updated. If adopted, the amendments will be on the books, but a plan is needed for when they will be revisited: will this occur during subsequent adoptions, or will the adopting jurisdiction simply update the reference to the base document? This automatically affects the “fit” of the amendments with the new adopted code or standard.
6. Be careful about scope and definitions. In efforts to amend codes, states have recently omitted any energy code criteria at all for low-rise multi-family buildings.
7. Examine whether the amended code will prevent the proper use of new training materials, software, commentary, and other key components of the support infrastructure that was built to support the model codes and standards.
8. Avoid including content in amendments that requires an action to be taken without specifying details regarding who is responsible to take the action, when it should be taken, and who the result is directed toward.
9. Make sure the amendment is enforceable and can be uniformly and readily understood by all who will use it—both those meant to follow it and those meant to enforce it.
10. The model codes are written as a comprehensive, well-coordinated package. In amending them, it is possible, and even likely, that an unintentional conflict with another code will be created.



11. Amendments that relate to conformity assessment should be avoided. There is considerable complexity associated with testing, listing, certification, and accreditation that can easily be modified and cause legal issues to arise or inadvertently mandate, by law, a singular testing and certification entity.
12. Resist the urge to complicate the adopted code with commentary, guidance, and other information that belongs in support materials and should not be part of the law.
13. Avoid listing of materials and products. Something may be omitted accidentally, technology changes, and it is easier to refer to a metric that acceptable materials must satisfy.
14. Don't include anything that is dependent on human operation as a condition for code compliance.
15. If permitting and approval stops with a certificate of occupancy, then operational requirements do not belong in the code (e.g., the system shall be *capable of doing X* as opposed to the system shall be *operated to do X*).
16. Resist amendments that specify that only a certain product be used. This can be viewed as restraint of trade and is the basis for rejecting proposed code changes at the national level.
17. Resist amendments that require high-efficiency heating and cooling equipment as a code minimum. This can violate the National Appliance Energy Conservation Act (NAECA) and can be legally overturned.
18. Rating systems are not codes and were not intended to be enforced in the traditional building regulatory process.
19. Consider the trades and the complexity of planning and executing construction in an area that represents a "code island" totally different from surrounding areas.
20. Consider liability in case the amendments are later found to have led to building failures.

By following this guidance and seeking clear answers when amendments are proposed, jurisdictions will help their constituents achieve the energy savings built into the model codes and standards.