

## **‘30 Percent Solution’: The Pieces Don’t Fit**

NAHB members must help fight proposed changes to the International Energy Conservation Code (IECC) that, if approved, would do little to solve our nation’s energy concerns and would significantly affect housing affordability, leaving too many home buyers out of the market and forcing them to remain in expensive-to-operate, inefficient homes.

The proposals were submitted by an ad-hoc collection of product manufacturers, environmental and interest groups called the Energy Efficient Codes Coalition. While the Coalition’s intentions to reduce energy consumption can be commended, the group did not evaluate the costs associated with their plans, which are considerable.

### **Background**

At the ICC (International Code Council) public hearings in February, the Energy Efficient Codes Coalition submitted a package of 33 proposed changes to the ICC’s International Energy Conservation Code that it claimed would increase energy efficiencies in new homes by 30 percent. The proposals are collectively known as EC-14 or the “30% Solution.”

The EC 14 proposal failed. And when the 33 proposals were later submitted individually, only eight were approved, either as written or with some modification. However, these proposals have been resubmitted and will be decided at the International Code Council Final Action Hearing in Minneapolis Sept 14-23, 2008. This time, a floor vote by all members will be required with a two-thirds majority necessary for passage.

NAHB views EC14 and several of the individual proposals as serving proprietary interests, with changes not driven by energy conservation needs but by some insulation manufacturers’ desire for an advantage in the competitive market between the fiberglass industry and others such as cellulose and foam manufacturers. Acceptance of the proposals would certainly eliminate the cellulose and foam markets from most applications.

Now, in preparation for the Final Action Hearings, NAHB and the NAHB Research Center staff have analyzed the Coalition’s 33 proposals and commented on the cost effectiveness and practicality of each.

NAHB members understand the importance of cost effectiveness and also how price increases – even for good reasons – are a serious disincentive for first-time home buyers and the construction of affordable housing stock.

And as an association whose members build 80 percent of the nation’s new homes, we also must act to be responsible stewards of our limited energy resources, in addition to our client’s financial resources. In light of increasing concerns about the price and availability of energy, members agreed at the 2008 International Builders’ Show to

support code proposals to increase energy efficiency so long as the payback on associated cost increases was no more than ten years.

The Energy Efficient Codes Coalition has campaigned actively with many groups to promote its 30% Solution. At the 2008 U.S. Conference of Mayors Energy Committee meeting in June, the Coalition introduced a resolution endorsing the full adoption of the 30% Solution by encouraging code officials to attend and vote in favor of the proposal. The resolution was approved by the mayors with only 30 of the nearly 500 attendees in favor of the resolution.

In addition to EC-14, other individuals and groups have introduced proposals that would significantly affect housing affordability with little corresponding benefit. Of main concern is EC 71, the proposal to inspect and test ductwork within a home. This is probably the biggest single proposal for energy savings and the largest cost incurred for those savings. EC-71 would require a visual inspection of ductwork installed in a conditioned space and a duct test performed by a certified testing group for ductwork installed in unconditioned spaces. This new testing requirement involves considerable time and the use of specialized equipment, resulting in fees of at least \$250 per home. It also eliminates the role of the code official in inspecting ductwork.

Further, EC-71 does not define the appropriate steps to take or procedures to follow if the ductwork fails the initial test, including whether retesting would be required.

NAHB urges your support to defeat these costly proposals by informing your code officials of your concerns for them and the building industry. Along with the residential fire sprinkler discussions at the 2008 ICC Final Action Hearings, please urge your code officials to attend the IECC and IRC-Energy discussions.

See Attached:

**NAHB's Energy Talking Points**

**NAHB's FAQs About Energy Codes**

**NAHB's Policy Related to Energy-Efficiency and Energy Codes**

## ENERGY TALKING POINTS

In preparation for the 2008 ICC Final Action Hearings  
Prepared by the National Association of Home Builders

*Home builders do not oppose energy efficiency in newly constructed homes—only cost-ineffective and impractical energy code proposals.*

Home builders have been in the forefront of providing more energy efficient homes for many years and will continue to champion energy efficient building practices throughout the country. In fact, since 1970 home builders have doubled the energy efficiency of the new homes they build.

Builders already adhere to strict energy efficiency standards. Our customers demand certain standards and features when they buy new homes and one of those is a level of energy efficiency they can both afford and benefit from while they live in the home.

NAHB opposes the proposals submitted for the IECC (International Energy Conservation Code) and IRC (International Residential Code) because it requires measures that are not cost-effective and affordable for the new home buyer. The energy efficiency requirements are unfairly applied to new home builders and their customers, the new home buyer.

Using average incomes and mortgage qualifying information for across the country, NAHB has determined that **a \$1000 increase in the cost of a new home would keep over 217,000 potential households from being able to purchase a home.**

The IECC has focused primarily on the thermal envelope of buildings to achieve energy efficiency. This has resulted in a disproportionate reliance on added insulation to achieve compliance with the code. This strategy has thus eliminated the spray foam and cellulous insulation products from the structure. It assures that fiberglass is the only approved material that can satisfactorily used to fulfill the requirements

Additionally insulating the basement of a home, one of the proposals submitted, is not a cost effective use of one's energy improvement dollars because most basement walls are naturally insulated by the soil on the outside of the basement walls.

The proposals submitted for change to the IECC and IRC do nothing to alleviate the real energy efficiency problem in the housing stock - the older existing home. There were very few proposals that addressed the older existing home, a sure example that the intent was not to save energy, but to promote specific products and special interests. Compliance with the new code proposals of the IECC will put the "burden" of saving energy on the new home buyer alone.

Only rational energy code changes based on sound science, economics, and practical implementation will make a real difference.

**Frequently Asked Questions  
About Energy Codes  
Prepared by the National Association of Home Builders**

**Q:** Why should the code change in relation to energy?

**A:** The code does change according to its usual cycle in the ICC model code hearings and in state and local adoptions. It is based on a consensus process that allows all organizations and interest to have a say and to agree to uphold. During the Code Development Hearings held February 18-March 2, 2008, in Palm Springs, for example, the IECC *rejected* RE-14 (the comprehensive code change for the 30% Solution). This is how consensus works and the way it allows for appropriate change.

**Q:** Why shouldn't the code change in relation to energy?

**A:** The code should change when it's appropriate. Changing technologies and changing science help justify raising the minimum threshold for safety and health of occupants. But the ability of code officials to enforce a code practically is a concern. Cost-effectiveness is also a factor, though, as some code changes may add exorbitant cost without actually providing safety, health, or other purported benefits. For energy, that benefit is increased energy-efficiency that could lead to reduced energy consumption. From consumer surveys and technical analysis, NAHB supports any code changes that will payback for the homeowner or homebuyer within 10 years. So, we believe the code should change under those conditions.

**Q:** What happens when codes require more expensive construction?

**A:** The NAHB predicts that 217,000 American households are priced out of homeownership every time the cost of a home goes up \$1000. The price of homes is a critical concern to most Americans, if not the most critical—most families don't have \$1000 to spare. NAHB is one of the few stakeholders concerned with that. We support tax credits and rebates for buyers to be able to take on the extra cost, as well as financing that accounts for it like energy-efficient mortgages. We also support homebuyers recovering some of those costs through energy savings. But where those supports don't exist or there is no cost recovery, cost must be a factor in how we build and buy homes in this country. Anyone who has ever bought a house knows this.

**Q:** What kinds of homes are affected by energy code changes?

**A:** Both the IECC and IRC can affect new home construction. New homes add at most 1.5% to the existing housing stock—which is where the majority of energy is consumed. This is especially true when it comes to homes that were built several decades ago. Any energy plan that wants to decrease overall energy consumption will have to address the existing housing stock if it wants to have any real impact.

**Q:** Are energy codes enforced?

**A:** There have been clear problems with enforcement of energy codes in the past, especially because so many jurisdictions have no tools or resources to administer them. Many energy advocates have pointed to these problems and are committing resources to change it. While the problem persists, any code changes will be ineffective.

**Q:** Are proposed code changes difficult to implement?

**A:** On the whole, they are. Our nation's builders have participated in many voluntary national and regional energy-efficient home programs in the past, and these were not without their technical complications and negotiations. Both our builders and those programs, including Building America and Energy Star®, would testify to that. As newer changes are proposed in construction (especially ones that don't fully consider the practical implementation), they will also make new construction more difficult—adding more costs to home construction.

**Q:** Are there special interests involved in promoting certain kinds of new codes?

**A:** Some of the core financial and resource supporters of increased energy codes are, not surprisingly, manufacturers of certain kinds of insulation and other energy-efficient equipment. Other energy-efficient product manufacturers have not had the same resources to be able to launch national campaigns to support their products in the same way. Other groups, like NAHB, have supported reasonable energy code changes regardless of which manufacturer group benefits.

**Q:** How will the proposed code change affect builder flexibility along with cost?

**A:** Current proposals call for the elimination of trade-offs that allow a builder to pick from a variety of technical options that will lead to the same goals for energy-efficiency but that will be more appropriate based on material availability and cost. Transparent technological, performance, or cost-effective analysis should be provided to justify changes in those options.

**Q:** Why the 10-year simple payback?

**A:** The NAHB has supported this rule-of-thumb because it most reflects consumers' understanding of how much they will recover when laying out the initial costs of an improvement. As energy prices increase, the time to payback decreases. So, increased energy prices will lead to rational choices by consumers to pay more upfront, and will be reflected in home builders' choices about what is built into their homes. Cost is a concern for homebuyers, and that could include paying for the costs of secondary effects of energy production and consumption if consumers want and like the benefits. When those effects are accounted for, there would likely be a change in the payback. NAHB uses this rule-of-thumb for all proposed code changes, including energy, and any code change that would require a specific product or technology or practice is subject to the same yardstick. There are other ways to measure payback (for example, spreading the cost out over the life of a mortgage), but the lending community and homebuyers have not chosen to account for those measures. Some of the proposed code changes, incidentally, do not even meet those other payback analyses.

**Q:** Don't homebuyers want energy-efficiency?

**A:** Most do, and they want to know how much it will cost them upfront and how much they will save down the road. That's why an easy-to-understand payback is so important. NAHB's own consumer preferences survey showed that 32% of homebuyers would pay only between \$0 and \$5000 in upfront improvements for an annual reduction of \$1000 in their utilities (or a median 2.5-year payback); 51% said they pay between \$5000 and \$10,999 (a median 8-year payback), and only 16% said they would pay more than \$11,000 (more than an 11-year payback on median). So, weighted and averaged, the consumer measure for payback is actually more conservative than NAHB's. Despite that, our builders have been voluntarily offering Energy Star and homes built to various other energy and green programs for several years to those homebuyers that are willing to take on the added cost. [These include the NAHB Green Home Guidelines and Standard.] If proposed code changes are passed, these costs are no longer the consumer's choice—they're mandatory.

**Q:** How do code changes factor into the current housing market?

**A:** Adding costs to homes does make the American dream out of reach for many families. We are seeing this in the current crisis, where homeowners are seeing decreased housing prices leading to foreclosures. At the same time, escalating utility prices are also a concern. New homeowners have to balance the added upfront costs for energy-efficiency with the potential savings down the road. This is why NAHB has a payback policy, unlike many of the proponents of energy code changes. Energy-efficiency can pay for them, but the cost of the improvements may not. NAHB sides with homeowners when it comes to these decisions, especially those homeowners that do not benefit from energy tax credits or rebates, or cannot qualify for energy-efficient mortgages. Energy code change activists have incorrectly and inaccurately described an intermediary effect of the housing crisis as its primary cause. Utility bills have been hard for most American families, but the actual causes of foreclosures are deeper economic and lending policies. We need codes and policies based on real affordability analysis, not speculation.

**Q:** Will code changes really cost more?

**A:** Not all of them, but most will. Even then, it's often worth the cost to include those changes when the cost will be recovered. Many code change proponents make unrealistic assumptions about the costs involved (though they have never actually built a home) and the paybacks. There certainly needs to be more open, transparent, peer-reviewed study of cost and benefit. In the meantime, NAHB will continue using its 10-year payback threshold to determine which additional costs make sense for homeowners.

**Q:** What's the difference between the IRC and IECC? How will changes in one affect the other?

**A:** The IRC (International Residential Code), which focuses on all aspects of low-rise residential construction, including its energy-efficiency, has been adopted by more states and jurisdictions than the IECC (International Energy Conservation Code), which focuses on energy-efficiency in all types of construction. So, both have different provisions and

reflect different consensus committees' decisions. In both code developments this year, though, the omnibus proposals for change were rejected.

**Q:** Why should the IECC include more and more stringent requirements?

**A:** The IECC should reflect what is appropriate for current conditions, and that may even include increased stringency. As energy costs rise and more accurately reflect the total costs of their production and effect, then consumers of both new and existing homes will logically improve their homes' energy-efficiency. If there is a reasonable payback for homeowners from code proposals that is based on good technical and economic analysis, then NAHB policy supports their inclusion. While the building code is a document for minimum structural health and safety that was first created to deal with fire prevention and tenement health, there is a need to take other considerations into account. They just need to be rationally considered, justified, and discussed through consensus before they become potential law.

## **NAHB Policy Related to Energy-Efficiency and Energy Codes**

### ***Energy Policy Overview***

Federal laws, regulations and policies influence the environment within homes and the cost of building and operating homes. Federal agencies such as the Environmental Protection Agency, the U.S. Department of Health and Human Services, the U.S. Department of Energy and the U.S. Department of Labor have issued regulations, for example, intended to increase energy efficiency, improve the air quality within homes and reduce the extent of radon and lead paint hazards within new and old homes.

Laws and implementing regulations meant to protect the health of occupants can increase the cost of construction significantly without a compensating increase in the general welfare to home owners and renters. Often, the added requirements or restrictions are placed on a broader category of homes or situations than needed to address the problem. Similarly, efforts to reduce energy consumption, address mold occurrence or increase the efficiency of electric utilities can have offsetting cost increases that ultimately eliminate households from buying, renting or operating their homes. Energy-saving requirements often ignore consumer choices and ability or willingness to pay. Benefits of change are emphasized without due consideration of costs.

NAHB urges consideration of costs as well as benefits when formulating and enforcing efforts to improve home environments and home energy usage. NAHB policies foster health protection that focuses on the specific problems rather than broad schemes that raise the cost of housing unnecessarily.

### ***Cost-Effective and Affordable Energy Codes and Standards***

NAHB urges lawmakers, regulators and other policymakers to support only those energy codes, standards and legislation that are cost-effective and affordable.

Further, NAHB defines increases in energy efficiency provisions of energy codes and standards to be “affordable” only if principal, interest, taxes and insurance, plus utilities, will be no greater after the inclusion of the cost of the additional energy-efficiency features required by any new energy code or standard provision than before.

Further, NAHB considers increases in energy efficiency provisions to be “cost-effective” only where the initial cost and annual savings to home buyers meet the following criteria:

1. Are analyzed from the perspective of first-time home buyers, who typically have modest incomes and limited resources for downpayments;
2. Are based on the final cost to the home buyer rather than the change in costs to the builder;
3. Are estimated using methods and data that are reliable and verifiable;
4. Result in a simple payback (initial cost divided by first-year savings) to the home buyer that does not exceed 10 years; and



5. Are evaluated on an incremental basis where the cost and savings for each change are calculated independently and added successively to a baseline that includes existing energy provisions as well as the other changes in a particular proposal.

Further, where the federal government mandates energy codes/standards for federally insured or guaranteed housing, such codes and standards must be cost-effective and affordable.

Further, NAHB urges Congress, state legislatures and local governments to work with private and public utilities, as well as the Department of Energy, to use incentives, grants and tax credits to assist the home buyer to purchase above-code energy features in the purchase of a new home.

Further, any energy efficiency legislation, regulation or code change related to housing be accompanied by an economic study of the impact on affordability and cost effectiveness.

Further, NAHB continues to develop compliance tools and conduct educational programs that will help builders and code officials understand and correctly apply the provisions of the energy codes and standards (i.e., International Residential Code, IRC; International Energy Conservation Code, IECC; and American Society of Heating, Refrigerating and Air-conditioning Engineers, ASHRAE).

### ***Support to Voluntary Energy Programs***

NAHB supports the efforts of industry groups and government agencies, at the national and regional levels, that promote voluntary programs to encourage energy-efficient construction practices, and

Further, NAHB recognizes and support the national voluntary programs that:

- Demonstrate added energy efficiency,
- Provide an option for upgrading the energy efficiency of existing homes and accessory structures, and
- Support housing affordability through effective energy-efficient financing alternatives that qualify for liberalized debt-to-income ratios and provide for downpayment assistance or lower monthly mortgage payments for home buyers, and

Further, NAHB recognizes and support the regional voluntary programs that:

- Demonstrate added energy efficiency,
- Encourage upgrading the energy efficiency of existing homes and accessory structures,
- Support housing affordability by encouraging effective energy-efficient financing alternatives, and
- Receive a letter of recommendation from local and state home builders associations, and

Further, that the Energy Committee be authorized to evaluate and approve national and regional voluntary energy programs that conform to these criteria and make an annual report to the Construction, Codes and Standards Committee on the actions taken.

### ***Performance Standards in Energy Codes***

NAHB supports effective performance compliance provisions in all model energy codes.

### ***Support for Green Building***

NAHB takes the leadership role and became the national voice for America's home building industry members who want to engage in "green" development, design and construction.

Further, NAHB promotes voluntary, builder- and market-driven solutions for green building and remodeling in lieu of mandatory local, state or federal regulations.

Further, NAHB commits to the following long-term objectives for green building:

1. Promote building practices that represent resource-efficient construction;
  2. Encourage the research and use of new technologies and practices;
  3. Stimulate market demand for cost-effective, environmentally friendly construction;
- and
4. Provide education and meaningful information to builders, remodelers, home buyers, home owners and regulators on the benefits of builder- and market-driven green building practices.

Further, NAHB seeks to bolster the success of local HBA programs and to ensure that outside organizations do not dictate the requirements for green building.

### ***Energy in Existing Homes***

NAHB urges Congress, state legislatures and local governments to work with public and private utilities to develop and implement incentives for rate-based energy efficiency upgrades and other reasonable mechanisms that assist home owners of existing properties in reducing energy consumption of existing homes and buildings, to the maximum extent that is cost effective given current and future financial and technological constraints.

Further, NAHB will work with governmental and other non-governmental organizations to streamline approval and inspection processes so that energy-related upgrades can be installed with little or no delays.

Further, supports and encourage the development of additional cost-effective technologies and affordable products and methodologies that can be used in the existing stock of single-family and multifamily properties to reduce their energy usage and improve their performance and thus reduce the emission of greenhouse gases.