

Article
Sound Energy Efficiency Policy
Prepared by the National Association of Home Builders

We are all concerned about energy efficiency. The price of oil is at an all-time high, making most of us reexamine our driving habits as gas prices climb. We are all concerned about the coming winter months and how we'll keep our homes warm. Even Americans who live in more temperate parts of the country are thinking about their friends and relatives who live in Pennsylvania or Michigan and how they will pay for their heating bills.

And in the long term, almost all of us worry about the effects of climate change and the consequences of our continuing reliance on fossil fuels, and what that means for the country we leave our children and grandchildren.

So when an interest group says it has the answer to the problem, we all pay attention. This particular group, the Energy Efficient Codes Coalition of manufacturers and environmental advocacy groups, has a catchy name for this remedy: They call it the 30 percent solution.

The 30 percent solution has it all: an argument with good guys -- the manufacturers, and bad guys -- the home builders. It's simple, catchy, and best of all, it claims to solve the problem -- vote for our side, these advocates say, and the issue goes away.

Unfortunately, the 30 percent solution raises more questions than it answers. Many of its parts have no basis in building science or technology. It's too expensive. And because its backers include only a small part of the building industry -- namely, insulation and window glass manufacturers -- the solution addresses only a small part of the challenges and opportunities presented by energy-efficient homes.

And in setting up this two-headed monster -- crusading advocates versus ignorant naysayers -- proponents of this so-called 30 percent solution are attempting to dumb down this significant challenge. The truth is that all of us -- home buyers and home builders, environmentalists and gas guzzlers, elected officials and taxpayers -- are in this together. We have at our disposal a wide variety of new technologies, knowledge, materials and skills. We won't solve our nation's energy efficiency problems by forcing home buyers to purchase and install only the proponents' new products.

Bad Science

A brief examination of the 30 percent solution soon reveals a disturbing fact: no open or transparent technological, performance, or cost-effective analysis has been proposed. Advocates say it's because it's not necessary. "Cost-benefit analyses for energy-efficiency improvements provide relatively little value in evaluating proposals due to the myriad assumptions that must be made," according to a "Myths and Facts" document on the EECC web site. "As a result, debates over cost effectiveness generally distract from the evaluation of the actual merits of the proposal and are typically led by opponents to particular improvements."

In other words, don't confuse people with facts: Improving the efficiency of the building envelope – the walls, foundation and attic, doors and windows -- by any set amount cannot correspond to a matching decrease in energy consumption, because the building envelope only addresses a part of the problem. Kitchen and laundry appliances account for about a third of home energy use, and they are not addressed by this proposal. Increasing the efficiency of the heating and air conditioning system or water heater reduces energy use – and that's not addressed by this proposal.

Thus, the 30 percent solution is riddled with proposed changes that make no sense in the aggregate. Adding more insulation? A good idea, when you consider the climate before deciding how much is appropriate, which the energy codes do now. But the 30 percent solution would require R-20 wall insulation everywhere, no matter what the climate. Let's see how that plays out in Climate Zone 4, where Washington, D.C. is located. The cost? About \$3,500. The cost savings? About \$87 a year.

The EECC proposal also includes reliance on so-called advanced framing techniques – an excellent choice for some homes in some situations, but not for every one. In some cases, complying with existing structural requirements in the code mean that these techniques cannot be employed – but in the 30 percent solution, builders don't have the choice.

High Costs.

The EECC dismisses the notion that making a home more energy efficient can be an expensive proposition, especially for first-time home owners. These home buyers, the argument goes, just don't know what's good for them. “Wouldn't they be better off incorporating energy efficiency investments into their mortgages to help stabilize monthly energy costs and potentially avert devastating energy bills they can't pay down the road?” the EECC web site asks.

Certainly – if they can afford the first-time cost and realize paybacks in a timely fashion. Under the 30 Percent Solution, every home would include double-paned windows. Going from single- to double-paned windows increases their cost by about \$1.50 per square foot of glass. The energy savings in warm climates? Zero.

Unfortunately, there are not “a growing number of mortgage companies providing reduced closing costs/fees for purchasing energy-efficient homes.” These so-called “green” mortgages address the amount of money the consumer is qualified to *borrow*. If a prospective home buyer qualifies for a mortgage of \$150,000 rather than \$145,000, that does not lower the interest rate or the closing costs.

And what about appraisals? The appraised value of a home directly correlates to how much financing is available. And while NAHB looks forward to working with the appraisal industry so agents can factor in the energy savings when valuing a home, the industry isn't there yet.

The website also misrepresents the number of households that are priced out of home buying for each \$1,000 price increase. It's not 10,000. It's 217,000. That's a significant number.

Getting to Energy Efficiency.

The National Association of Home Builders is opposed to the code change proposals known as the 30 Percent Solution. But despite the rhetoric from code change advocates, it's inaccurate to say that NAHB opposes energy efficiency.

Our members build 80 percent of all new homes each year. That means our members build the majority of the nation's Energy Star®-rated homes, green homes, and technologically advanced homes. Our members incorporate solar panels, foam and cellulose insulation, tankless water heaters, geothermal heat pumps, low-emissivity windows, low-flow faucets, structural insulated panels – in fact, every single new product that can increase energy or water efficiency, durability, or indoor environmental quality has been tested, used and in many cases incorporated into home building practices by our members.

Not every technology is appropriate for every home. It depends on the geography, the weather, the cost and consumer or market preferences. Home builders weigh all those factors when they make decisions because that's how they are able to sell homes to their buyers – and stay in business.

It's disingenuous and misleading to make arguments that belittle the issue of affordability or that equate expensive consumer choices – like marble countertops – with fire and life safety issues, which is what building codes are for.

The truth is that new homes already are built to be considerably more energy efficient than the homes of 20 years ago. We're learning more about building science. Technologically advanced heating and air-conditioning systems, new choices for siding, windows and insulation, more efficient appliances and fixtures combine to make the home of today a much better energy value.

The truth is that NAHB wrote the Model Green Home Building Guidelines in 2005 and launched the NAHB National Green Building Program in 2008. *[The HBA of Connecticut has adopted and is promoting the NAHB Green Home Standard as the Build Green Connecticut™ program. See www.hbact.org under the Resources menu]* We are educating home builders and helping them to educate buyers so that homes can not only be built with more energy-efficient features but operate more efficiently after they have been purchased.

The truth is that NAHB supports code change proposals that can make homes safer, healthier and more energy-efficient when the payback for the cost of these proposals is 10 years or less. We don't think it's fair for home owners to pay for more – especially when the technology behind the proposal may change or become less expensive as time goes by.

The truth is we need a balance: with breakthroughs in building science and innovative new techniques weighed carefully against their cost, efficacy, availability and ease of implementation.

The so-called 30 percent solution is no solution at all.