

The Newsletter of the Manufactured Housing Research Alliance

MANUFACTURED HOUSING  
**TECHNOLOGIES**

## About MHRA

The Manufactured Housing Research Alliance (MHRA), the research arm of the manufactured housing industry, provides content for *Technologies*. ■ *Technologies* highlights the research of MHRA and examines other research and development activities throughout the industry.

■ For more in-depth information about research in the factory-built housing industry, or to find resources mentioned in *Technologies*, visit the MHRA Web site at [www.mbrabome.org](http://www.mbrabome.org). ■



### Manufactured Housing Research Alliance

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## Energy Star Marketing Toolkit

ENERGY STAR qualified homes are easy to sell with the right marketing plan and materials. While the homebuyer may not be able to tell by looking, they will feel the difference of an ENERGY STAR home in increased comfort and savings.

To support retailers and manufacturers as they explain the benefits of ENERGY STAR construction to homebuyers, MHRA is developing industry-specific promotional materials including point-of-purchase displays, signage, sales literature, a sales video and press releases.

The following ENERGY STAR marketing materials specifically designed for manufactured housing are being developed:

- Consumer brochure
- Posters for sales centers
- Window decals for model homes
- Brass plaques for qualified homes
- Lucite engraved plaques for partners
- Video for sales promotion and training
- PowerPoint Presentation for training

Visit the MHRA Web site at [www.mbrabome.org](http://www.mbrabome.org) to obtain these ENERGY STAR marketing materials.

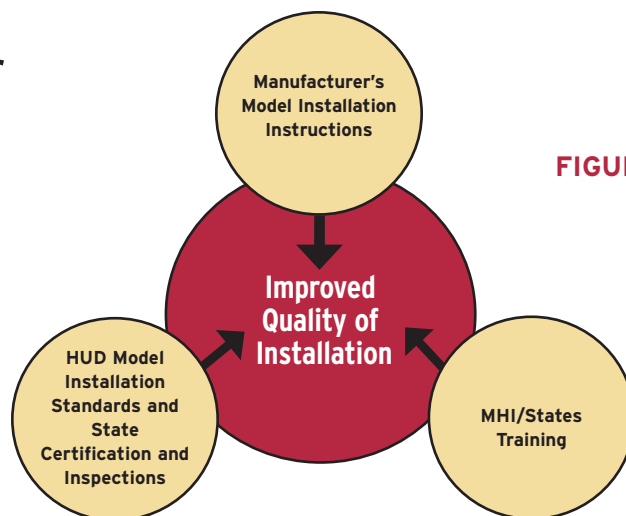


FIGURE 1

## Standard Installation Manual Speeds Innovation

The manufactured housing industry often views home installation as a weak link in the chain of providing quality homes.

Most installers set up homes from a variety of manufacturers and therefore must master several, and often very different, installation instruction manuals that vary in approach, content, organization and degree of detail.

MHRA will work with manufacturers and installers to create a model Manufacturer's Installation Manual to standardize and structure procedures for installing homes. The Installation Manual will become the conduit for quickly passing on new installation methods to the installer.

As illustrated in *Figure 1*, the manufacturers' model installation instructions is one of three components that will together provide an integrated, consistent approach to improve installation quality and customer satisfaction.

The DAPIA-reviewed and stamped Model Manufacturer's Installation Manual will serve as a structured template that individual manufactures can tailor by superimposing product-specific information and adding branding.

The model manual would be kept up-to-date with new installation materials, products or techniques, greatly reducing the time from innovation to practice. Manufacturers would receive periodic e-mail notices of additions or other improvements to the model that could then be downloaded from the MHRA Web site.

# Reshaping the Way Homes Are Built

The Lean Production research project is in the second phase of a program aimed at developing new production techniques that will shape the homebuilding factory of the future.

The ambitious goals

of this effort include:

- increasing design and production flexibility;
- expanding the range of building solutions offered;
- cost effectively increasing production efficiency;
- producing and installing

homes with zero defects, and

- eliminating waste in cycle times, building materials, and labor utilization.

Phase I of the research established the current

baseline performance of factory-built home production, which will be used to set performance benchmarks.

Phase II seeks to apply the lessons learned from the benchmarking survey to the operations of four to eight homebuilding plants. Special consideration will be given to areas of production known to have quality issues, low productivity, capacity bottlenecks and constraints to customization.

By including a variety of plants in this effort, researchers will gain a broad understanding of the range of improvement opportunities for lean production techniques that can be generalized to the industry-at-large.

Participating manufacturers will be required to invest time and resources in the project and assign a senior staff member as a lean advocate. The lean advocates will be ultimately responsible for transferring knowledge to the plant and company.

For more information about the research, or the plant selection process, contact Jordan Dentz at [jdentz@research-alliance.org](mailto:jdentz@research-alliance.org) or 212-496-0900, ext. 13. For more information about the lean production project visit the MHRA Web site at [www.mbrhome.org](http://www.mbrhome.org).

## Energy Efficient Mortgage



With the new \$1,000 tax credit in place for manufactured homes built to ENERGY STAR through 2007, it may be easy to overlook the less splashy, but equally important changes over at the Federal Housing Administration (FHA). As reported in the last Technologies column, FHA has made ENERGY STAR manufactured homes eligible for FHA's Energy Efficient Mortgage (EEM).

Any FHA-approved lender can now offer an EEM to a manufactured homebuyer. The best part of this new program is that it doesn't expire, making it an essential finance tool for the manufactured housing industry.

The sample *FHA Energy Efficient Mortgage Calculation* shows the benefit that this new mortgage choice offers to homeowners. In this example, the savings from buying an ENERGY STAR manufactured home would amount to \$27,360.

### Sample FHA Energy Efficient Mortgage Calculation

	STANDARD CODE	ENERGY STAR
Property value	\$70,000	\$72,000
Downpayment	\$2,100	\$2,100
Base mortgage amount	\$67,900	\$67,900
Energy efficiency improvements cost	\$ -	\$2,000
Total mortgage amount	\$67,900	\$69,900
Mortgage insurance premium (MIP)	\$2,037	\$2,037
Mortgage amount plus MIP	\$69,937	\$71,937
Monthly principal, interest, taxes, and insurance (PITI) and MIP payments	\$568	\$581
Monthly energy cost	\$245	\$155
Monthly outlay (PITI, MIP and utilities)	\$813	\$737
<b>OVERALL MONTHLY SAVINGS</b>	<b>N/A</b>	<b>\$76</b>

**Buyer qualifies for an additional \$2,000 but pays \$76 less each month in homeownership costs (\$912 per year)**

Assumptions: 7% mortgage, 30 year term, 10 year lifetime on energy efficiency measures