

HIGH PERFORMANCE MANUFACTURED HOUSING: *Success Stories from Mississippi's Response to Hurricane Katrina*



Sponsored by The **Environmental and Energy Study Institute (EESI)** and
the **Federation of American Scientists (FAS)**



Renderings of MS Cottage from the MSAHPP Proposal

TODAY: Demonstrate that the Mississippi Alternative Housing Pilot Program (MS AHPP) is

- a model of successful emergency housing design and procurement,
- an example of affordable housing strategy that is also energy efficient, safe, and durable,
- part of the solution to reducing U.S. energy demand and mitigating climate change.

What is “High Performance”?

- EISA Title IV, Sec. 401:
“... a building that integrates and optimizes on a life-cycle basis all major high performance building attributes, including energy conservation, environment, safety, security, durability, accessibility, cost-benefit, productivity, sustainability, functionality, and operational considerations.”
- Whole Building Design Guide: www.wbdg.org

EISA Title IV, Sec. 413

“... the Secretary shall by regulation establish standards for energy efficiency in manufactured housing...” (in four years and in consultation with manufacturers, the Secretary of HUD, and the Manufactured Housing Consensus Committee)

Why High Performance?

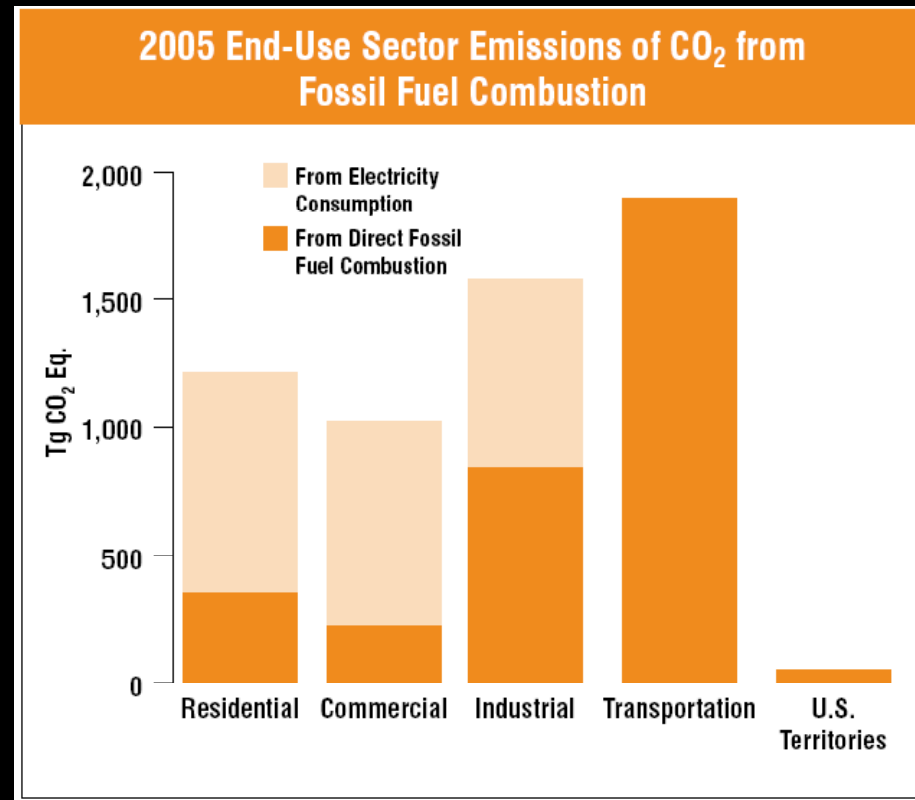
- Buildings use more than 40% of total U.S. energy and are responsible for more than 40% of greenhouse gas emissions.
- Energy efficiency is a cost-effective solution that is available RIGHT NOW.
- Integrating renewable energy strategies can further reduce the building's carbon footprint.
- Water-efficient design and use of renewable resources for building materials protects the environment.
- Good indoor air quality protects occupants' health.

But.....

If a building is destroyed by a strong wind, is not functional, or is inaccessible to disabled persons, it doesn't really matter how "green" and energy-efficient it is.

We want to address energy efficiency and GHG reduction in the context of high performance design.

Housing's Role in Global Warming (U.S. EPA)



What is Manufactured Housing?

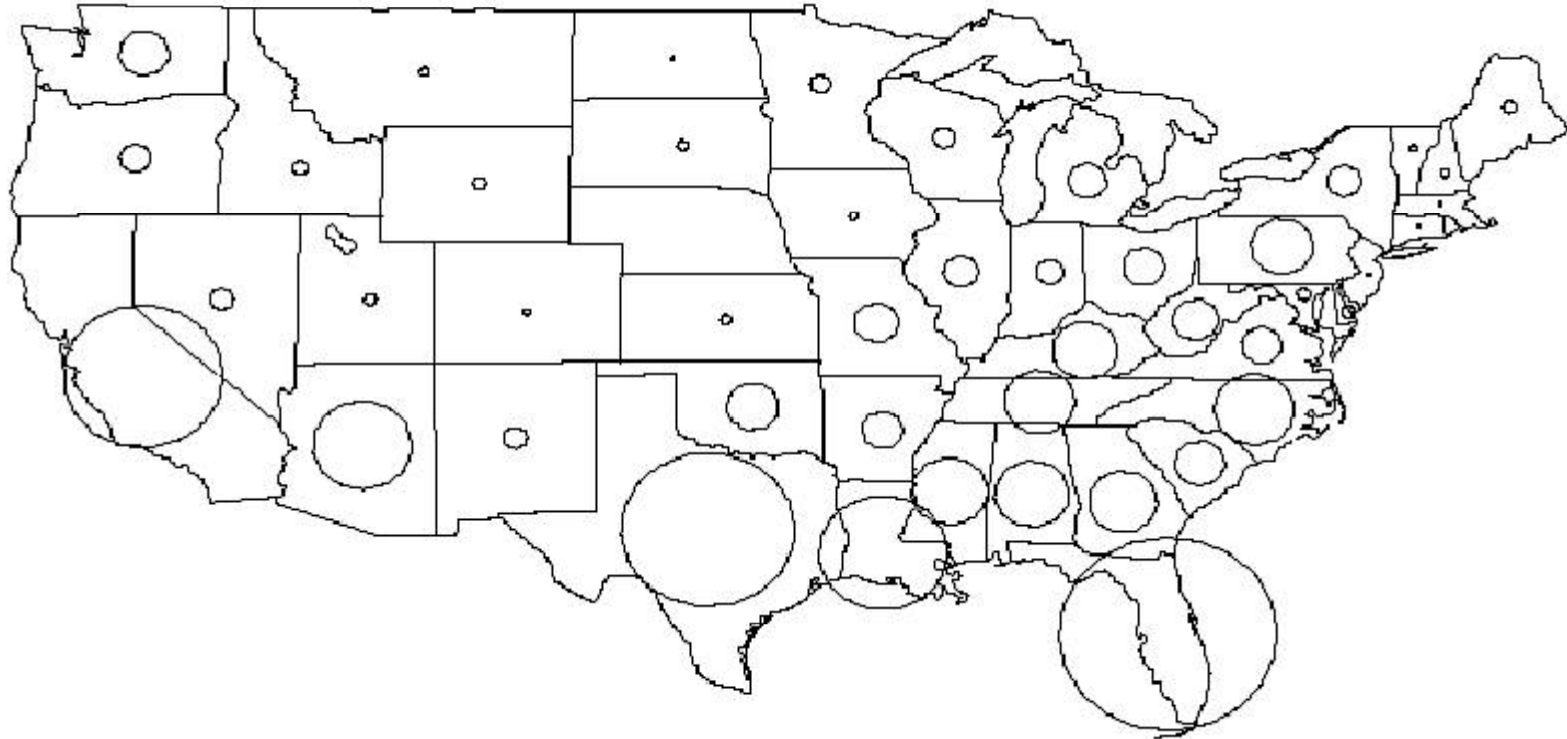
Two Types of Factory-Built Housing:

- **Manufactured Homes:** Built entirely in the factory, transported to the site, and installed under a federal building code administered by the U.S. Department of Housing and Urban Development (HUD). The Federal Manufactured Home Construction and Safety Standards (commonly known as the HUD Code) went into effect June 15, 1976. It is the only federally regulated national building code.
- **Modular Homes:** Built to the state, local or regional code where the home will be located. Modulares are transported to the site and installed.

Source: Manufactured Housing Institute (MHI)

www.manufacturedhousing.org

Manufactured Housing Industry 2006 Placements: 111,000 Total



- Regulated by the HUD Code (24 CFR 3280)
- Roughly 100,000 shipped per year
- Priced 10-35% less per square foot than conventional site-built homes according to MHI



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The MS AHPP is an intersection of **Emergency Housing** and **High Performance Building**.

- FEMA success
- Mississippi success
- Manufacturing success
- HUD and HUD-code housing success
- Important first step to HIGH PERFORMANCE MANUFACTURED HOUSING.