

A Research Institute of the University of Central Florida

The Retrofit Challenge for Florida Affordable Housing Providers

Leveraging Federally-Funded Research for Regional Benefit

U.S. DOE

Building America Cost-Shared Research with Industry U.S. HUD

ARRA Neighborhood Stabilization Program 12 Florida Affordable Housing Entities

> 70 House Study 46 Deep Energy Retrofits!

The Retrofit Challenge

Best Practices for Existing Affordable Housing (30% Improvement)

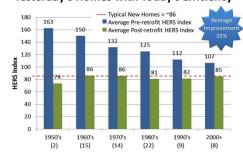


Real World Science. Real World Best Practices.

What Makes the Meter Spin?



Yesterday's Homes with Today's Efficiency



Reference Publications online at www.ba-pirc.org/pubs/

McIlvaine, J.; Sutherland, K.; Beal, D. Applying Best Practices to Florida Local Government Retrofit Programs. Peer review pending, anticipated December 2013.

McIlvaine, J.; Sutherland, K.; Beal, D. 2013. Current Best Practices for High Performance, Deep Energy Retrofits in Florida Affordable Housing. FSEC-RR-444-13. Cocoa. Florida.

McIlvaine, J.; Sutherland, K.; Martin, E. (2013). Energy Retrofit Field Study and Best Practices in a Hot-Humid Climate. Cocoa, FSEC-



Affordable, Practical, "Off The Shelf" Best Practices

Low- and No-Cost Measures & Quality Assurance

☐ Easy-to-do measures for most houses

Health, Safety, and Durability Measures (Risk Reduction)

- □ Combustion safety
- ☐ Whole house pressure balance

Moderately higher performance replacements

- ☐ Heating & cooling system (SEER 15 heat pump)
- ☐ Windows (low-E)
- ☐ Water heating (EF 0.92)
- ☐ Energy Star lighting, appliances, and ceiling fans
- ☐ Light or white exterior finishes
- ☐ Meet new construction code for heating and cooling

Efficiency Enhancements

- ☐ Substantially leak free duct system
- ☐ R-38 attic insulation
- ☐ Window film
- ☐ Air sealing at plumbing and fixtures openings





Typical HERS Index Scores

1960's ~150





Take the Retrofit Challenge Pledge; Adopt the Best Practices

U.S. DOE Sponsored Technical Assistance FSEC Building America Researchers

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