



## Building America Publications: Making Research Accessible

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International Builders' Show

Builders Challenge Version 2

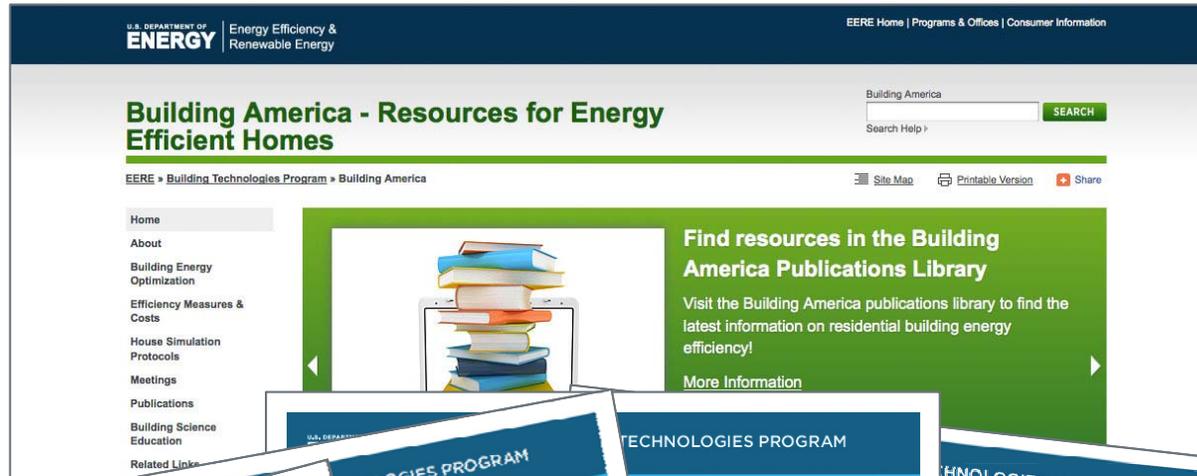
Building America Innovations

Implementation Standing Technical Committee

Website Renovation



# Technical Resources



[www.buildingamerica.gov](http://www.buildingamerica.gov)

# Guides for New & Existing Homes



# Our Newest Guides



## Whole-House Proven Performance

## Measure Specific



U.S. DEPARTMENT OF **ENERGY** | Energy Efficiency & Renewable Energy

**BUILDING TECHNOLOGIES PROGRAM**

Building America  
Efficient Solutions for New Homes

**Case Study:**  
Title of Case Study Here  
[Arial Bold 23 pt]

City, State of house or development [Arial 15pt]

**PROJECT INFORMATION [Arial Bold 12pt]**

Construction: New Home  
Type: Single-family, affordable  
Builder: Habitat for Humanity of Palm Beach County, Florida  
[www.habitatpbc.org](http://www.habitatpbc.org)  
Size: 950 to 1,340 ft<sup>2</sup>  
Price Range: about \$90,000  
Date completed: 2011  
Climate Zone: Hot-humid

**PERFORMANCE DATA**

HERS index:  
Builder standard practice = 84;  
case study 1,340-ft<sup>2</sup> house = 57

Projected annual energy cost savings: \$434

Incremental cost of energy-efficiency measures: \$1,500

Incremental annual mortgage: \$75

Annual cash flow: \$359

Billing data: Not available [Arial 10pt]



**Project Description [Arial 18pt]**

Use journalism style: Lead with something significant about the project (first home constructed by a production builder to achieve this level of efficiency, a deep energy retrofit on a difficult type of construction, a unique solution to an efficiency-related technical challenge, lower HERS rates, demonstrated significant energy savings, won awards, improved sales, improved health and safety, etc.) In the first paragraph, answer the who, what, when, where, and why. Note the purpose of the project (if retrofit, owner remodel, repo and resale, demo home; if new, demo home, custom, or production). Identify the Building America teams involved and their role. The first paragraph should answer the question: why does the research matter? [Times New Roman 11pt]

In the second paragraph, provide project context (business setting, market conditions, special climate considerations, etc.). Provide more details on the project (description of the homes, unique architectural features, size of the development, description of technologies used, etc.) Provide project outcomes (completed, occupied, received awards, received incentives, sales data, utility data or other measured data, etc.)



Photo/Captions: Use high-resolution JPEG photos of the project. Include both finished house shots and shots that show specific measures. Readers usually look at photos and captions first, use the captions to tell your research story. At least one caption should tell the builder's name, place, overall value of the project. Another caption can highlight a significant finding. For example, caption 1 - Tommy Williams Homes moved ducts inside the building envelope on all house plans to achieve average HERS scores of 56 on its 1,500 to 2,000-ft<sup>2</sup> homes in Gainesville, Florida. Caption 2 - Artistic Homes employs advanced framing techniques like 2-stud corners and open headers, which use less lumber and provide more space for R-21 blown cellulose in its 2x6 24-inch on-center framed walls. [Arial 9pt]



U.S. DEPARTMENT OF **ENERGY** | Energy Efficiency & Renewable Energy

**BUILDING TECHNOLOGIES PROGRAM**

Building America Case Study  
Technology Solutions for New and Existing Homes

**Ducts Inside Conditioned Space**  
[Arial Bold 23 pt]

City, State

**PROJECT INFORMATION [Arial bold 11 pt]**

Project Name: [Arial plain 10pt]  
Location: City, ST  
Partners: Builder company name, u/d, Building America partner team name, u/d  
Building Component: Building envelope component, HVAC, lighting, or water heating  
Application: New and/or retrofit; Single and/or multi-family  
Year Tested: 20XX  
Applicable Climate Zone(s): all or specify which ones

**PERFORMANCE DATA [of the measure alone, not whole house]**

Cost of Energy-Efficiency Measure (including labor): \$X,XXX

Projected Energy Savings: XX% heating, cooling, or overall savings

Projected Energy Cost Savings: \$XX/month or \$XXX/year



[Times Roman 11 pt] In the first paragraph, state the context for the measure. (For example, "Ducts are commonly located in unconditioned attics, crawl spaces, and basements where they experience up to ten Studies indicate leaking ducts can account for heating or cooling losses of up to 30% to unconditioned space.")

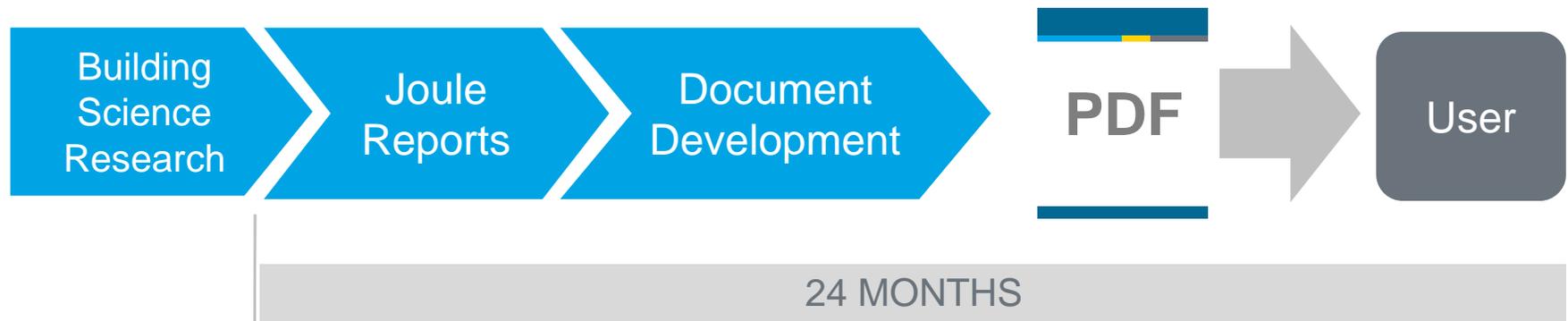
Explain what the measure is. Describe how it works. Mention any building science issue(s) addressed (air flow, thermal flow, moisture flow are better controlled). Note the benefits of the measure (e.g., higher efficiency, improved comfort or health, less call-backs, more useable space).

(For example, "Habitat for Humanity of Palm Beach, Florida, worked with Building America to determine the most effective way to incorporate heating and cooling ducts within the thermal boundary of its homes. Ducts had been located in vented, unconditioned attics. The Building America partner, the Industrialized Housing Partnership, recommended sealing and insulating the attics along the roof line with spray foam insulation to provide a conditioned space for the ducts and the high-efficiency heat pumps. A ducted fresh air intake brings fresh air into the return side of the air handler. Moving the ducts and air handler into conditioned space greatly reduced conduction losses for the ducts and concerns about duct leaks. Ducts were still insulated and sealed with mastic at joints to improve distribution efficiency.")

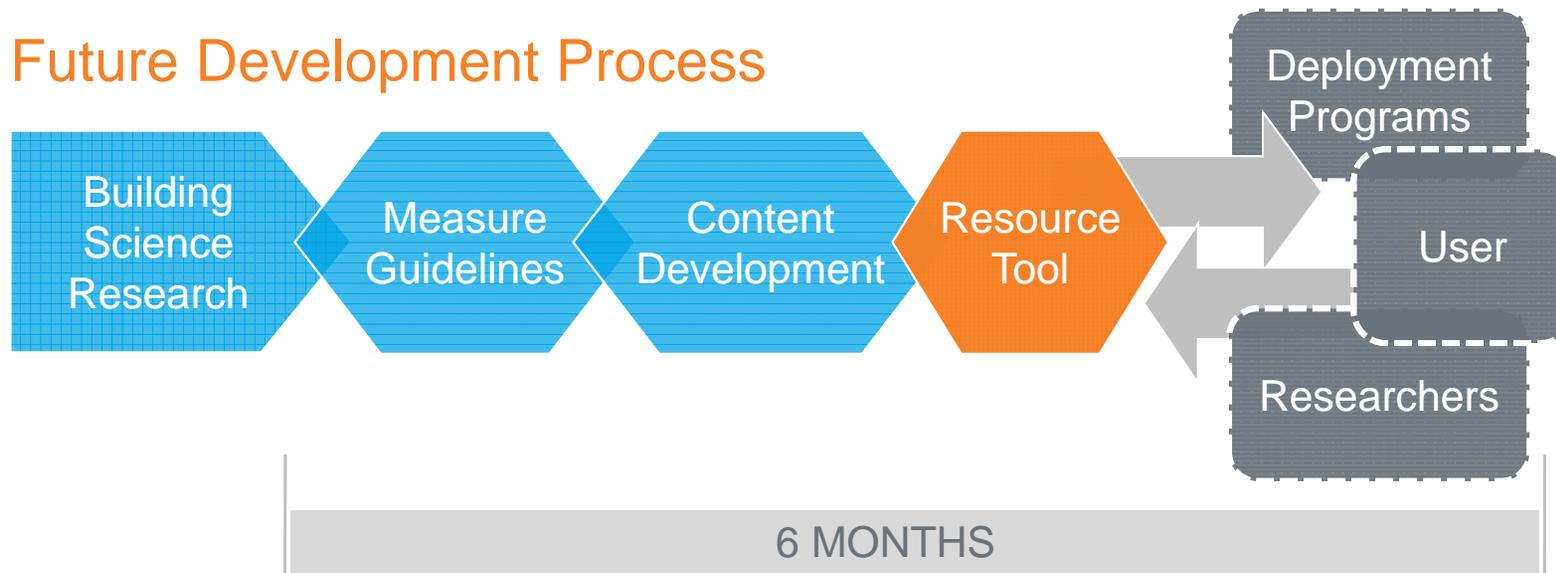
"You can include a quote from the builder specific to this measure if there is room." [Arial 12 pt]  
Joe Q Builder,  
Title, company [Arial 10 pt italic]

# Document Audience

## Existing Development Process



## Future Development Process



# World Class Research...

## ... at Your Finger Tips



- Content pieces from the team are critical.
- Measure Guidelines – Key mechanism for providing content
- How does your team best fit in the puzzle?



- Web-based tool to assist standard setting organizations working in residential energy efficiency to post proposed standards and track public comments.
- Enhances workforce development.
- The tool was used in a standard setting process last year and is currently used to track comments on other documents.

The screenshot displays the 'Building America Document Review Tool' interface. At the top, there is a navigation bar with 'User Name', 'Password', 'Log in', 'Help', and 'Register' buttons, along with a 'Remember Me?' checkbox. The main header reads 'Building America Document Review Tool'. Below this, a breadcrumb trail shows 'Formal Public Comment Process' and 'Home Energy Auditing Standard'. A yellow warning box states: 'If this is your first visit, be sure to check out the FAQ by clicking the link above. You may have to register before you can post: click the register link above to proceed. To start viewing messages, select the forum that you want to visit from the selection below.' Below the warning, a table lists forum topics:

Title / Comment	Comments / Views	Last Comment By
Sticky: Home Energy Auditing Standard (entire document) Started 12-13-2010 03:45 PM	Comments: 0 Views: 7,840	12-13-2010 03:45 PM
Section 1. Scope Started 12-14-2010 12:19 PM	Comments: 0 Views: 8,516	12-14-2010 12:19 PM
Section 2. General Audit Requirements Started 12-14-2010 12:23 PM	Comments: 4 Views: 7,823	02-07-2012 11:41 AM
Section 4. Disclosure and Ethics	Comments: 0 Views: 0	02-07-2012 11:41 AM

At the bottom right, there is a 'Local Intranet' icon.

- We are currently seeking organizations that are interested in taking advantage of the tool. A webinar was held for organizations earlier in February, and another webinar is being scheduled.
- The site is customized to each organization to create a somewhat seamless web presence.
- For more information visit  
<http://buildingamerica.pnnl.gov/forum>

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[www.buildingamerica.gov](http://www.buildingamerica.gov)

<http://buildingamerica.pnnl.gov/forum>

