

Fairburn – the first energy-efficient, healthy, affordable, community in metro Atlanta. All of the adjectives in this description are important to builder Jay Epstein of Health-E Enterprises. “I used to use these three terms to make up a triangle representing the way I build,” says Epstein. “Working with Building America has changed my image to a diamond with the fourth critical element being systems engineering and design.”

Epstein describes himself as a long-time “student of the power companies,” using their programs for education and marketing energy efficiency. “What a relief to find the Building America program,” says Epstein. “Building Science Corporation let me ask ‘what about solar hot water?’ or ‘what about 12 instead of 10 SEER?’, They were always right there with the analysis; and always came back with guidance, not mandates.” BSC worked with Health-E Enterprises to reengineer their HVAC system (see Key Features) to develop the innovative termite-resistant perimeter slab insulation utilizing borate-treated expanded polystyrene (EPS) (see [Houses that Work – Mixed Humid Climate](#) for detail).

Epstein also swears by the [Builder’s Guide – Mixed Humid Climates](#). He uses it with his site super, subs, and all the builders that come knocking to see what Fairburn is all about. “It’s also a great resource for overcoming language barriers on the job site—all those detailed drawings!” Epstein says with his trademark chuckle.



Epstein is always on the lookout for projects that need the “diamond” approach. He learned about the need for and challenges posed by Fairburn at the Greenprints conference in Atlanta a couple of years ago. There were lots of air-sealing details to be worked out (particularly given the garage-under design of the homes), as well as the details of moving ducts into conditioned space and incorporating mechanical ventilation and dehumidification. The results are impressive—a finely tuned home that heats and cools for about 75 cents a day, at about a break even total cost for the Building America changes.



But how do you market the pretty technical aspects of the Building America features? Epstein does not even hesitate: “You show them the energy guarantee, you have them listen for the jets overhead that they no longer hear inside their tight new home, and have the model home set up with plexiglass cutouts so that they can see what is normally hidden. The first time home buyer is open to and reassured by this attention to detail, this demystification of how their home should work.” **All Fairburn homes are performance tested**, come with an **energy guarantee**, and are being supported by innovative forgivable soft-second mortgages and reduced up front mortgage costs.



Health-E Enterprises continues to learn as well—they have a new spray urethane foam detail to deal with the knotty issues of air sealing at the rim joist with open web floor trusses. And on a project in Virginia, Epstein is exploring the value engineering of structural panels. See the [Fairburn Energy Analysis](#) for more information about energy savings.



Fairburn Atlanta, Georgia

Health-E Enterprises

1,400 - 2,100 sq. ft., 3 bedroom, 2 bath
\$117,000 - 145,000 (including land)

Key Features

- Innovative termite-protected slab perimeter insulation
- Advanced framing
- Low-e spectrally selective windows
- Cellulose cavity insulation
- Carbon monoxide detectors
- Fully engineered HVAC system including all ducts sealed with mastic and in the conditioned space, correctly sized equipment, a simplified duct layout, transfer grilles for pressure relief, controlled mechanical ventilation and dehumidifier

Cost Summary for Building America Metrics

• Advanced framing	+ \$ 250
• Insulating sheathing	+ \$ 400
• Eliminate housewrap	- \$ 400
• Controlled ventilation system	+ \$ 150
• Downsize air conditioner, simple duct layout	- \$ 750
• High performance windows	+ \$ 250
• Dehumidifier	+ \$ 175
• Slab edge insulation	+ \$ 200
TOTAL PREMIUM	- \$ 25

Key Partners/Products

- Perform Guard (www.branchrivier.com/perform.html)
- Huber (www.huberwood.com)
- Shaw Industries (www.shawinc.com/Welcome/products.htm)
- Sherwin Williams (www.sherwin-williams.com)
- Advanced Tech
- NCFI (www.ncfi.org)