

Government-sponsored research proves otherwise.

BY BETSY PETTIT

any architects, builders, and consumers are in denial about the true cost of a house. Beyond the price tag, there are operating and maintenance costs. Indirectly, there are ecological and political costs.

The U.S. Department of Energy's Building America program (sidebar facing page) uses a team-design strategy to identify trade-offs that make houses less expensive to build as well as less expensive to own. The homes that my firm designs and builds, such as the one featured here, are not only affordable but also feature materials and construction details that create healthful living conditions. And the benefits of a small house that's built right extend beyond the homeowner's checkbook.

## Infill houses benefit family, community, and planet

An excellent way to reduce construction costs is to take advantage of existing sewer, water, electricity, and roads. Often overlooked, vacant lots or vacant houses can be diamonds in the rough, keeping property taxes low, cutting the commute, and providing a few more customers for the family-owned corner store. Because infill lots are a particular Continued on p. 60

The Building America program (www.buildingamerica.gov) provides research money (through the U.S. Department of Energy) to five teams that use building sites as laboratories. They develop prototype houses, test the performance of the houses over time, and then make design adjustments.

The objective of the Building America program is to build homes on a community scale that use less energy, are faster to build, cost less, and

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provide a healthful environment for their inhabitants. A long-term goal is to build homes that produce as much energy as they consume, also known as "zero-energy homes."

Building America teams are composed of groups that typically don't work together: architects, planners, engineers, equipment manufacturers, large-scale homebuilders, mortgage lenders, materials suppliers. By working together, they can identify interdisciplinary trade-offs to boost a house's performance and cut costs.

Over the past 10 years, Building America teams from across the United States have built more than 20,000 houses that use 30% to 90% less energy.