

U.S. Department of Energy - Energy Efficiency and Renewable Energy Energy Savers

Whole-House Systems Approach

Designing and constructing an energy-efficient house requires careful planning and attention to details. A whole-house systems approach can help you and your architect develop a successful strategy for incorporating energy efficiency into your home's design.

A whole-house systems approach considers the interaction between you, your building site, your climate, and these other elements or components of your home:

- [Appliances and home electronics](#)
- [Insulation and air sealing](#)
- [Lighting and daylighting](#)
- [Space heating and cooling](#)
- [Water heating](#)
- [Windows, doors, and skylights.](#)

Builders and designers who use this approach recognize that the features of one component in the house can greatly affect other components, which ultimately affects the overall energy efficiency of the house.

These are some benefits of using a whole-house systems approach:

- Reduced utility and maintenance costs
- Increased comfort
- Reduced noise
- A healthier and safer indoor environment
- Improved building durability.

You can use the whole-house systems approach with any [home design](#). Using this approach, you also might consider designing a home that [generates its own electricity](#).

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Energy Savers

Professional Services

- [Find an Architect](#)
American Institute of Architects

Department of Energy Resources

- [Climate Zone Best Practices and Case Studies](#)
Building America

Related Links

- [Green Building Home Guidelines](#)
National Association of Home Builders Research Center
- [House as a System](#)
E-Star
- [SystemVision: Great Standards for Living](#)
Advanced Energy
- [Whole Building Design Guide](#)
- [A Showcase of Resource-Efficient Homes](#)
Homes Across America

Reading List

- *Whole-House Approach Benefits Builders, Buyers, and the Environment* ([PDF 1.22 MB](#)). (October 2004). U.S. Department of Energy.

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