

Cambridge Homes Increases Energy Efficiency in a Mix of Housing Types

Cambridge Homes — Crest Hill, Illinois

Building America is sponsored by the U.S. Department of Energy. The program aims to:

- Reduce energy use by 50% and reduce construction time and waste
- Improve indoor air quality and comfort
- Encourage a systems-engineering approach for design and construction of new homes.
- Develop system cost/performance tradeoffs that improve housing quality and performance without increasing cost.

New houses designed by Cambridge Homes, with technical support from the U.S. Department of Energy's Building America Program, save their homeowners money by applying the principles of "whole-building" design to the entire home product line, so that regardless of the model chosen, home buyers can enjoy consistently high levels of comfort and performance with the added benefit of reduced operating costs.



Building America packages for Cambridge homes include double-glazed low-e windows, fully insulated basements, R-38 ceiling insulation, and ductwork (not located within the slab) brought within the conditioned space.

Cambridge uses the following energy saving features as a minimum in all of its Building America houses. Some models may include additional features that provide further value for the homeowner.



Innovative design strategies and sustainable building components are employed by builders working with CARB and the Building America Program to improve the quality and performance of a broad range of housing sizes and types, such as the Cambridge Forest Glen townhome community in Carol Stream illustrated above.

-  **High-performance low-e windows**
-  **Upgraded ceiling insulation**
-  **Low-loss duct systems**
-  **Fully insulated basements**
-  **Downsized AC Systems**

Cambridge Homes is working with the Consortium for Advanced Residential Buildings (CARB), one of the five Building America industry teams, and is currently constructing houses to these Building America standards in several communities in and around the Chicago, Illinois area. All Building America houses built by Cambridge receive an Energy Star label that certifies the performance rating of these houses is at least 30% better than the Energy Star reference house based on the Model Energy Code. The Energy Star program is a joint effort of the U.S. Department of Energy and the Environmental Protection Agency.





BUILDINGS FOR THE 21ST CENTURY

Buildings that are more energy-efficient, comfortable, and affordable ... that's the goal of DOE's Office of Building Technology, State and Community Programs (BTS). To accelerate the development and wide application of energy efficiency measures, BTS:

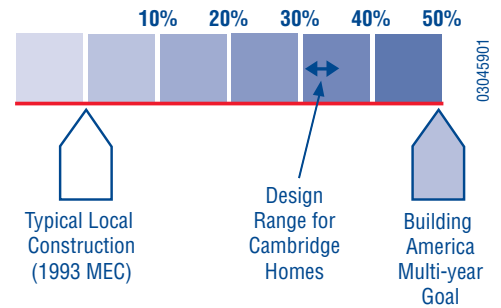
- Conducts R&D on technologies and concepts for energy efficiency, working closely with the building industry and with manufacturers of materials, equipment, and appliances
- Promotes energy-/money-saving opportunities to both builders and buyers of homes and commercial buildings
- Works with state and local regulatory groups to improve building codes, appliance standards, and guidelines for efficient energy use
- Provides support and grants to states and communities for deployment of energy-efficient technologies and practices.

The Approach

Building America's systems-engineering approach unites segments of the building industry that have traditionally worked independently of one another. It forms teams of architects, engineers, builders, equipment manufacturers, material suppliers, community planners, mortgage lenders, and contractor trades. More than 230 different companies make up the five Building America consortium:

- Building Science Consortium (BSC)
- Consortium for Advanced Residential Buildings (CARB)
- Hickory Consortium
- Industrialized Housing Partnership.
- Integrated Building and Construction Solutions (IBACOS) Consortium

Building America Performance Goal (Heating and Cooling Energy Savings)



The teams design houses from the ground up, considering the interaction between the site, building envelope, mechanical systems, and other factors. With this approach, the teams can incorporate energy-saving strategies at little or no extra cost.

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TO LEARN MORE ABOUT THIS BUILDING AMERICA PROJECT, PLEASE CONTACT:

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An electronic copy of this factsheet is available on the Building America Web site:
www.eren.doe.gov/buildings/Building_America



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