



PATH AND ENERGY EFFICIENCY IN EXISTING HOMES



The Partnership for Advancing Technology in Housing (PATH) is a public/private sector initiative that seeks to expand the development and utilization of new technologies in order to make American homes stronger, safer, more durable and more energy efficient. The program is managed by HUD's Office of Policy Development and Research. In support of the interagency Partnerships for Home Energy Efficiency, significant PATH resources are being committed to promoting energy efficiency in existing homes.

The Roadmap for Energy Efficiency

The key to PATH involvement in energy efficiency in existing homes is the PATH Roadmap for Energy Efficiency in Existing Homes. While other PATH roadmaps address technology innovations in *new* homes, the Roadmap for Energy Efficiency targets *existing* housing and *existing* technologies. There are a wealth of off-the-shelf products that can reduce energy use, sometimes substantially. Progress will in large measure be the result of strengthening systems for marketing, installing, and financing energy upgrades, whether or not the underlying technologies are new. A key focus of the Roadmap is to provide homeowners with credible, reliable information about energy efficiency in their homes, and to develop tools for the remodeling industry that will increase their effectiveness in incorporating energy efficiency in existing remodeling activities.

PATH and the Partnerships for Home Energy Efficiency

In support of the Partnerships for Home Energy Efficiency, HUD is committing PATH resources to implement the following initiatives identified in the Roadmap:

- ▶ **Develop guidelines or protocols for energy-efficient remodeling.** In partnership with the remodeling industry, HUD is initiating a multi-year project aimed at developing voluntary guidelines for energy-efficient remodeling. Beginning in September 2005, the project will develop protocols for assessing the energy efficiency of an existing home and identifying energy upgrades that provide maximum economic return to the homeowner over time. The protocols will provide guidance to remodeling and trade contractors and homeowners, and help ensure that dollars invested in energy upgrades result in maximum savings. Users will be able to identify and evaluate potential energy improvements, either as stand-alone projects that can improve comfort and reduce energy bills, or in conjunction with other work (such as room additions, bathroom or kitchen remodeling). The protocols would provide a consistent, high-quality approach that can be used by those who work in the remodeling and rehabilitation industry and can significantly impact energy efficiency decision-making by property owners.

The protocols will be developed with significant input from remodelers, energy specialists, consumers, and existing home performance practitioners. The initial protocols are expected to be available for testing in September 2006.

- ▶ **Contractor credentialing and certification.** In partnership with the U.S. Environmental Protection Agency (EPA) and Department of Energy (DOE), HUD is supporting the development of an industry-recognized contractor certification or credentialing program for energy efficiency. A strong, effective certification program that ensures the competency and integrity of remodelers and trade contractors is fundamental to countering negative perceptions of the industry. Certification also will be a strong motivator for remodelers and trade contractors, providing a way to differentiate themselves as energy-efficient solutions providers. Accordingly, “a strong, effective certification program that includes training, testing, and periodic review is required.” This work is being carried out by the Building Performance Institute, based in Albany, NY.
- ▶ **A building typology approach to retrofits of existing homes.** This fall HUD will issue a Request for Proposals to develop and pilot a standard retrofit package for specific housing types in particular local markets. Services to be provided will include developing a methodology for selecting four housing types to be tested during the project; developing specifications for implementing energy retrofits in these housing types and for measuring performance of completed retrofits; and piloting the application of these specifications in the four locations where these housing types predominate. (See HUD’s Small Business Forecast at www.hud.gov).
- ▶ **Field testing and demonstrations.** PATH will continue to support field testing of energy-efficient remodeling of existing homes. PATH has supported field testing of a range of energy-efficient equipment in existing homes, including, for example, installing ducts in conditioned spaces in Albertville, Alabama; a water-cooled air-conditioning system and tankless hot water heater in Florida; and comprehensive energy retrofits in Henderson, Nevada, and Ithaca, New York. PATH has also supported demonstration projects for energy efficiency in existing homes (primarily in Habitat for Humanity projects).
- ▶ **Low-E storm windows and additional R&D.** PATH is also supporting cooperative research into energy-efficient technologies that have application to existing homes. One such effort is the development of low-E storm windows in partnership with DOE. PATH also is supporting with DOE more advanced research into high-performing, electrochromic windows.

Key Strategies

- STRATEGY 1: PROVIDE CONSUMER INCENTIVES FOR IMPLEMENTATION.** Create incentives for consumers to implement energy-efficient solutions, either by themselves or by engaging professional assistance.
- STRATEGY 2: MOTIVATE CONTRACTORS OR REMODELERS TO DELIVER ENERGY-EFFICIENT SOLUTIONS.** Develop tools for remodelers, trade contractors, and do-it-yourselfers to understand the economic and social benefits of delivering energy-efficient solutions.
- STRATEGY 3: DEVELOP UNIFORM ENERGY EFFICIENCY GUIDELINES FOR REMODELER AND TRADE CONTRACTORS.** Develop guidelines for analyzing the efficiency of existing homes and helping homeowners combine sound energy efficiency decisions with other remodeling and renovation projects.
- STRATEGY 4: IMPROVE RETROFIT BUILDING ENVELOPE PERFORMANCE TECHNOLOGIES.** Provide a continual flow of emerging and new technologies that will reduce energy required to heat, cool, and light existing homes.
- STRATEGY 5: ENABLE TRADE CONTRACTORS AND REMODELERS TO DELIVER ENERGY-EFFICIENT SOLUTIONS.** Provide home repair and remodeling professionals with the tools, skills, and knowledge needed to guide homeowners to energy-efficient solutions and to effectively implement these solutions.
- STRATEGY 6: DEVELOP A PERFORMANCE MONITORING SYSTEM FOR ENERGY CONSUMING EQUIPMENT.** Develop a system that gives homeowners the information that they need to understand and manage energy consuming equipment.
- STRATEGY 7: INCREASE THE VALUE CONSUMERS ASSOCIATE WITH ENERGY EFFICIENCY.** Deliver a consistent, coordinated outreach message to homeowners on the value of energy efficiency.
- STRATEGY 8. BUILD CREDIBILITY FOR REMODELERS AND TRADE CONTRACTORS.** Establish industry credibility by implementing an effective contractor credentialing program.

For More Information

Please see the Partnerships for Home Energy Efficiency website at www.energysavers.gov and visit the PATH web site at www.pathnet.org.