



High Performance Windows

Today's high-performance windows can significantly reduce winter heat loss and summer heat gain. They can also improve your view, reduce condensation, and minimize fading of fabric and furniture through UV coatings. Proper selection of windows, doors and skylights can significantly effect how much money you spend or save every year on keeping your home bright and comfortable. ENERGY STAR labeled windows are twice as efficient as the average window produced just ten years ago. Proper installation, orientation, tree planting, and home sealing can help you save even more energy and money!



WHAT MAKES A WINDOW ENERGY EFFICIENT?

Today, manufacturers use an array of **advanced technologies** to make ENERGY STAR-qualified windows.

- IMPROVED FRAME MATERIALS**
Wood composites, vinyl, and fiberglass frames reduce heat transfer and help insulate better.
- LOW-E GLASS**
Special coatings reflect infrared light, keeping heat inside in winter and outside in summer. They also reflect damaging ultraviolet light, which helps protect interior furnishings from fading.
- GAS FILLS**
Some energy-efficient windows have argon, krypton, or other gases between the panes. These odorless, colorless, non-toxic gases insulate better than regular air.
- WARM EDGE SPACERS**
A spacer keeps a window's glass panes the correct distance apart. Today's warm edge spacers—made of steel, foam, fiberglass, or vinyl—reduce heat flow and prevent condensation.
- MULTIPLE PANES**
Two panes of glass, with an air or gas-filled space in the middle, insulate much better than a single pane of glass. Some ENERGY STAR-qualified windows include three or more panes for even greater energy efficiency, increased impact resistance, and sound insulation.

Contest Home Example

In the contest winning home, the existing windows were vinyl double pane with an efficiency u-value of approximately .45. They were purchased by the previous homeowner about 5 years ago, but they were poorly installed with evidence of water leaks and damage in some of the windows. This was caused, in part, by modifications that were made during installation to accommodate awnings on one side of the home.

American Vision Windows replaced the existing windows with high performance vinyl double pane windows manufactured by Anlin Window Systems. The new windows have an argon gas super spacer bar, which gives a better u-value because it is a non-conductive material. The windows also have a Low-E coating, which reflects ultraviolet light, to keep the house cooler in the summer. Additionally the new windows have a u-value of .29, which will increase the energy efficiency of the home.



During installation, the homeowner chose to remove the awnings so as not to require the window modification that contributed to the leaks in the previous installation. At first, the homeowner was concerned that they would miss having the awnings, but that has not been the case. They notice now that all the rooms are brighter and require them to turn on fewer lights, an additional energy-saving benefit. Best of all for the homeowner is that the new windows better deflect the summer's heat. In the past, the homeowners had noticed how hot the carpet was in front of the windows, and their daughter was unable to sit at her desk in her room to do homework because of the heat from the afternoon sun. Now, there is no noticeable difference standing in front of the windows during the heat of the day.

The homeowners were also impressed that American Vision Windows was able to replace their garden window in the kitchen with a similarly-styled, higher efficiency version. The homeowners were especially appreciative that American Vision Windows recommended that the window in the bathroom be replaced with a double-hung version that allows them to open a portion of the window while still leaving them their privacy.



How To Do Your Own Home Energy Makeover

The Anaheim energy makeover contest-winning home demonstrates how homeowners can significantly reduce their energy costs and improve home comfort and safety. You can do your own home energy makeover by participating in Anaheim Public Utilities' Home Investment Package (HIP) Program. The HIP program bundles various rebate offers into a one-stop shop designed to make homeowners sit up and take notice of the more than \$15,000 in savings they can realize through the program. These savings include a waiver of permit fees for energy-efficient improvements that can cost up to \$1,000, and up to \$14,000 in incentives. Plus, special low-cost financing is provided by the Electric & Gas Industries Association (EGIA).

For more information on Anaheim's Home Investment Package, please visit www.anaheim.net and click on Public Utilities, then Home Investment Package.

About The Contest

The Home Investment Package (HIP) Home Energy Makeover Contest was sponsored by Anaheim Public Utilities and the Electric & Gas Industries Association (EGIA) to demonstrate how homeowners can significantly reduce their energy costs and improve home comfort and safety. More than 500 Anaheim residents entered the contest, and twenty finalists were selected through an application screening process that identified those homes with the greatest potential to demonstrate energy savings. Contest sponsors donated the products and services featured.

For more than 100 years, Anaheim Public Utilities has served Anaheim water and electric customers with low rates and reliable service. Anaheim Public Utilities is Orange County's only publicly owned water and electric utility. The Electric & Gas Industries Association (EGIA) is a non-profit organization dedicated to advancing energy efficiency and renewable energy solutions through a nationwide network of contractors, distributors, manufacturers and utility companies.

To view a series of these fact sheets on other aspects of the Home Energy Makeover, go to www.egia.org/anaheim

Sponsor Information

Anlin Window Systems and American Vision Windows Are Proud Sponsors Of The
Anaheim Home Energy Makeover Contest



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