



Zero Net Energy Home, Tampa, Florida

Madico Window Film Helps South Tampa Residents Achieve their Goal of a Zero Net Energy Home



Adding window film to this home reduced energy consumption by an estimated 4%.

Project Summary:

Project: Zero Net Energy Home

Location: South Tampa, Florida

Installer: Florida Energy Conservation Advisors

Type of Film: Madico Exterior 20

Installation Date: July 2013

Scope: 28 windows, 317 sq. ft

The Challenge:

As energy prices continue to rise and communities across the globe face prolonged power outages due to unprecedented natural disasters, zero net energy (ZNE) buildings offer resilient spaces that are resistant to volatile energy markets and remain operational in the face of emergencies.

In recent years, South Tampa, Florida residents Dan and Christine Fisher have been working towards the goal of creating their own zero net energy home. Their now 20 year old, 3,000-square-foot house was not originally built with energy efficiency in mind but the couple always knew they wanted to move the home in that direction. Dan Fisher, utilizing his experience as an information technology scientist, researched every aspect of the home's energy use and put a comprehensive plan into place. ZNE buildings must produce an equal or greater amount of energy than their actual power usage, which requires both renewable on-site power generation and energy efficiency measures.

The Solution:

The couple chose to start with small improvements on their road to a zero net energy house. They began by adding new attic insulation and then moved on to bigger projects such as finding a solution to keep the house cooler during the hot summer months. The Fishers, being Florida residents and having experienced hurricane season, knew they wanted Energy Star double-paned, hurricane-rated windows. Knowing he needed to even further increase the energy efficiency of the new windows, Fisher called Florida Energy Conservation Advisors for help.

After an evaluation of the home and its windows, Florida Energy Conservation Advisors suggested adding Madico's Exterior 20 film to the glass. Applied on the exterior of the glass, the film would be able to block heat without the risk of any glass breakage to the double-paned windows.

The Results:

The application of Madico's Exterior 20 film offered protection from the sun's powerful UV rays shining through the windows and heating up the space. As a result, the home's air conditioning system was not forced to run as frequently, increasing the overall energy efficiency. The film will also help prevent fading and damage to the home's new sustainable bamboo flooring and furnishings.

Once all of the renovations were completed, the Fishers were able to reduce their electric bill from \$500 per month to \$17 per month. It is estimated that the addition of Madico's Exterior 20 film alone contributed to a 4% reduction in energy usage. This is a significant savings through the simple application of window film, especially considering all of the other energy saving components that are also in place.

"For over four years, we strived to create both a zero net energy and a green home, and to lessen our carbon footprint," said Dan Fisher, zero net home owner. "Adding the UV solar film to our windows improved their heat rejection and energy saving properties, ultimately helping us reach net zero."