# Home Performance in Paradise: a Case Study

by Griffin Hagle

**Editor's Note: Home performance is a tough enough business in colder climates. But what about when it's 72 degrees Fahrenheit and sunny nearly year-round? San Diego's weather has helped earn it the motto 'America's Finest City,' but occupants of poorly performing buildings here largely face the same problems as in the rest of the country; allergies, noise, pests, mediocre comfort systems and more can make indoor environments anything but a paradise.**

**Using a net zero energy retrofit of his 1,100-square foot home as a case study, a sustainability expert explores the readiness of contractors to design coherent solutions, the consequences of relying on utility rebate programs, and how best to communicate the value of home performance to homeowners stuck in the "mild climate" mindset.**

Sunshine, beaches, and sparkling pools: few cities can compete with San Diego's lifestyle. Housing costs are high, but natural gas is cheap, and solar electricity gets cheaper by the day. Considering that you could probably live comfortably year-round in a treehouse, why should anyone fuss with building performance in the first place?

Wayne Longdon offers an answer to that question.

I first met Wayne last year at a meeting of the San Diego Passive House Alliance. The chapter's vice president and a longtime resident of Cardiff, just up the coast from San Diego, he's pushed against the "green glacier" of inertia in mainstream construction for decades.

Retrofits are an especially hard sell. Energy savings alone rarely return the investment in this climate, leaving most people feeling trapped in inaction. (When I once described the comfort problems in my own rented 90-year-old bungalow to the property owner, she told me, "That's just how old homes are.")

Of course, doing nothing has its costs. Many neighborhoods are spread across wooded canyons that supply a steady stream of critters to garages, crawlspaces, and attics. A homeowner once told me she could hear mice "tap-dancing" on her recessed lights at night. Temperatures countywide rarely resemble the beachfront idyll of travel brochures. The lack of an air conditioner during the summer can be shrugged off near the coast, but in poorly performing homes further east it's a nightmare. As in any major city, noise and air pollution can be problematic. One in ten houses has a pool, most using egregiously inefficient single-speed filtration pumps.

These are problems, Wayne knows, for which home performance has solutions.

His opportunity to make his case lies in an 1,100-square foot house that his wife, Nicola, inherited from her late father. Built in 1970 and located in sunny, inland Escondido, it's the poster case for an upgrade: poor insulation, single-pane metal windows, an atmospheric gas furnace and no air conditioning. The couple plans to complete upgrades this summer in time for their USGBC chapter's Green Homes Tour in October, then rent it to their son and his family.