

## Case Study 5: Re\_home

From: [http://inhabitat.com/team-illinois-affordable-re\\_home-is-prepped-for-natural-disaster-recovery/](http://inhabitat.com/team-illinois-affordable-re_home-is-prepped-for-natural-disaster-recovery/)



In the last five years, the US has experienced a whirlwind of tornadoes, many of which left behind a devastating trail of destruction. So when students from the University of Illinois at Urbana-Champaign set out to design their entry into the Solar Decathlon architecture and design competition which concluded last week, they were thinking of all of the tornado victims. The central premise behind their Re\_Home is a fast response time in order to get families in more permanent housing. As such, Re\_Home is sustainable, flexible and easily set up - assets they showed off during last week's assembly before the competition began.

This year, a strong focus was placed on affordability and Team Illinois worked hard to minimize costs where possible through the use of materials. They estimate the final cost of the Re\_home, which consists of two modules with a master bedroom, a guest room/office/2nd bedroom, one bath, and an open living, kitchen and dining area to be about \$250,000. Prefabricated and assembled off site, the modules are both easily transported on one truck and then quickly off loaded and set into place. In addition, pre-assembly of the 7.2 kW solar system (comprised of 3 panels of 8 E18: 230 modules by Sunpower Corporation) means that as soon as the house arrives, it can start providing power, which is critical during emergency and recovery situations.

The solar panels also act as a solar canopy to shade the south facades, which are paneled with a mix of 60% rice husks, 22% common salt, and 18% mineral oil and can be personalized with different finishes. Super insulation and high performance glazing minimizes losses, while a centrally located air-source heat pump with a forced air distribution system with energy recovery provides efficient heating and cooling. The home is organized around a private and public triangle to maximize space. Outside, an edible garden provides on-site food production and reclaimed wood and recycled materials finish out the interior.

At the end of the competition, Re\_home came in 7th place with 875.715 pts, a nice leap from the 11th place spot they were in earlier.



