

Team New Jersey, a collaboration between New Jersey Institute of Technology and Rutgers University, designed and created the eNJoy House, which challenges traditional concepts and techniques for building high-performance, energy-efficient homes. The prefabricated house was first erected last summer on the NJIT campus. It was disassembled and then reassembled in the nation's capital on the National Mall, along with 18 other university team entries from around the world, at the very competitive bi-annual U.S. Department of Energy's 2011 Solar Decathlon.

*[CONTINUED]*



SOLAR AND SUSTAINABLE

THE

HOUSE

# enjoy





THE eNJoy HOUSE CHALLENGED THE KNOWLEDGE, SKILLS AND STAMINA OF NJIT ARCHITECTURE AND COMPUTER SCIENCE STUDENTS GUIDED BY ASSOCIATE PROFESSOR RICHARD GARBER, AIA.

**WE NEVER THOUGHT THE CRANE WOULD COME:  
TESTING IN NEWARK  
JULY 9-26**

Onlookers, including reporters, waited for the crane to deliver the precast concrete panels. Finally, three hours late, a rig longer than most fire engines came rolling around the corner, attempting to make its way into a narrow street adjacent to the site where the first iteration of the house would be assembled. Everyone held their breath as the first 12-inch thick wall was placed.

The house was erected in stages over a multi-week painstaking period. The central core features – the mechanical, electrical, plumbing and control systems – would be put into place upon rebuilding the house in Washington D.C.

July 26 topping-off ceremony: Gasping, as paraders through the structure felt the temperature plummet at least 10 degrees. Precast concrete, used for the first time in the 10-year history of the competition by Team New Jersey, allowed for a cooler interior in the hot summer sun.

108°F RECORD-HIGH HEAT





**RACING THE CLOCK  
BY NIGHT :  
SEPTEMBER 13-20**

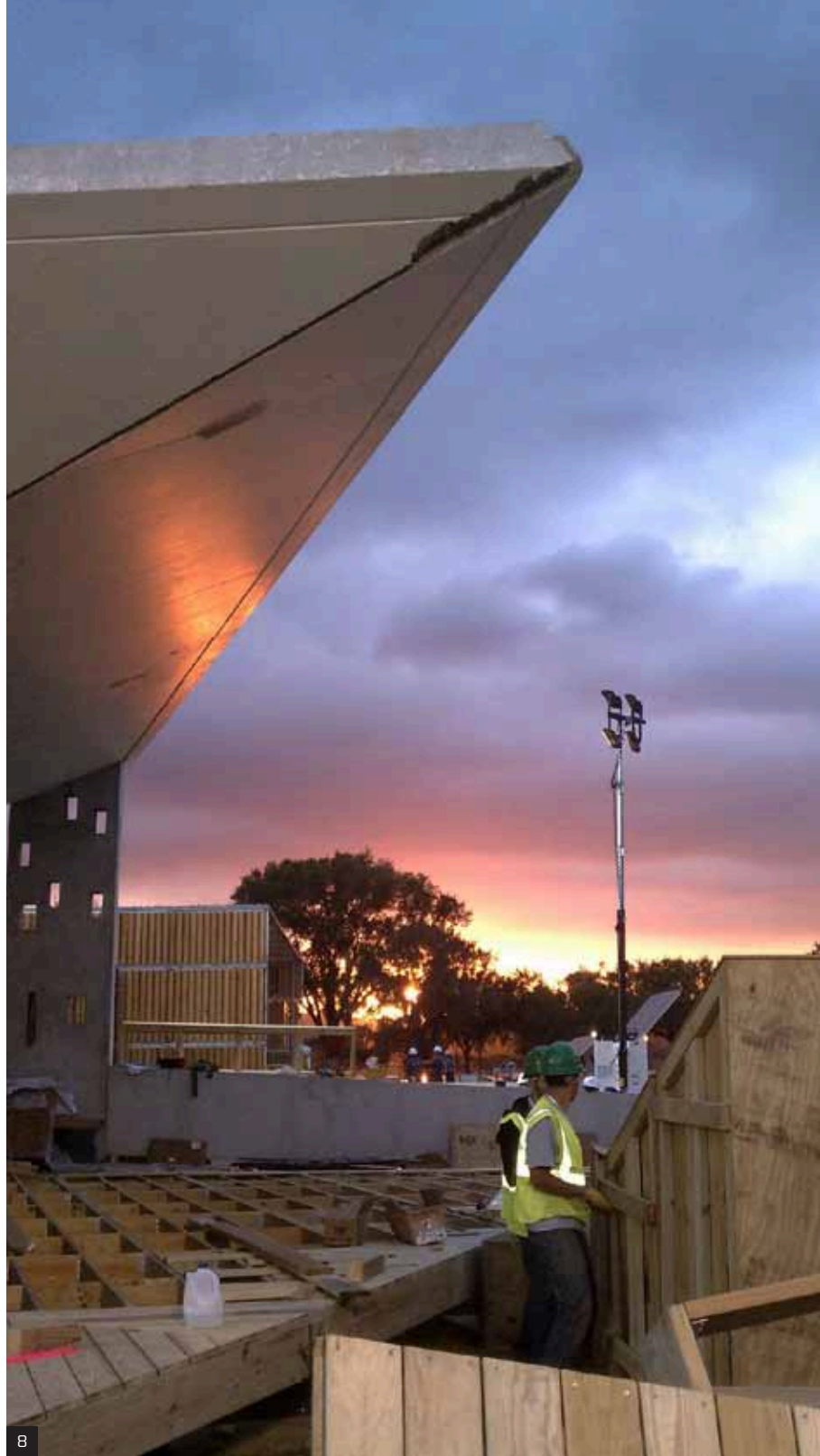


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Do you know what it's like to assemble a house this size in a week, and to race the clock by night? Ask a Team New Jersey member who's now had the experience of working non-stop 24/7 to reassemble the eNJoy House on the National Mall.



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Their efforts included installing electrical and other building systems after it was taken down and transported on 25 flat-bed trucks from its humble Newark beginnings.

*[continued]*

*D.C.'S 5TH WETTEST SEPTEMBER*

LIGHTS, CAMERA, ACTION:  
A SHOWCASE FOR ARCHITECTURAL  
AND TECHNICAL CREATIVITY

Designed around a central core containing integrated systems, the eNJoy House featured what architects refer to as an “inverted hip roof [9].” The clever design facilitates the collection of rainwater to support landscape irrigation and grey water reuse, as Urs Gauchat, dean of the College of Architecture and Design, reiterated throughout the process. Photovoltaic panels on the roof provide electricity to power all building systems (9). Lest anyone think moonlight was the primary night-time light source, we’ll confess now that powerful spotlights, and moonlight when available, did the trick.



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10



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*"I JOINED TEAM NEW JERSEY BECAUSE IT WAS A WONDERFUL OPPORTUNITY TO GAIN REAL-WORLD EXPERIENCE THAT MOST GRADUATES ENTERING THE WORKFORCE WILL NOT GET. IT ALLOWED ME TO EXPLORE AND CREATIVELY SOLVE ISSUES OF SUSTAINABILITY."*

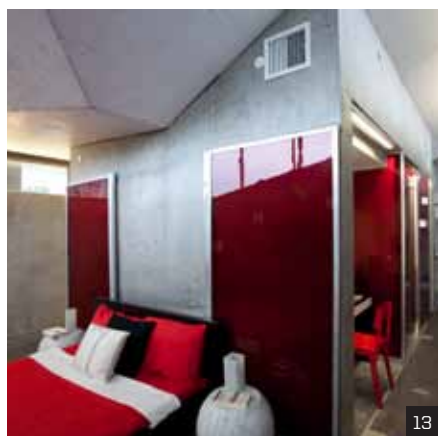
*— Jennifer Switala NJIT '11, Team New Jersey student leader*



With glass in the windows, signs installed and the dishwasher working, the day arrived when the one-story house, accessible to people of all ages and mobility levels, was ready for visitors. It was not a mistake that the modernist bedroom was devoid of all closets. Peeking down the hall, visitors found more than a dozen linear feet of comfortable built-in storage space highlighted by a desk or dressing table (13). Across from the sofa (15) stood a floor-to-ceiling built-in media unit.

## U.S. SENATOR MENENDEZ VISITS: SEPTEMBER 22

New Jersey Senator Robert Menendez challenged New Jersey's public research universities to enter the competition over two years ago, and his vision led to this instructive and memorable project. Menendez addressed students at the completed structure the day before the competition opened.



## THE PUBLIC TAKES A LOOK: SEPTEMBER 23 – OCTOBER 2

Perhaps most gratifying was seeing the long lines of visitors to the eNJoy House. Although the competition was daunting and the Team New Jersey entry did not win, it was a remarkable experience, said all participants. The hope is not only to return to the competition with another entry – everyone looks forward to reassembling the house at a special exhibit hosted by the Liberty Science Center in New Jersey, where it now remains disassembled and in storage. Long live eNJoy!

Industry partners: PSE&G, Northeast Precast (concrete panels), SKANSKA (construction management), Petra Solar (solar panels), J. Supor & Son Trucking & Rigging Co., Inc. (transport to Washington), Edison HVAC (mechanical equipment), Frau Group USA (furniture), Advanced Solar Products (consulting and PV installation), and Serious Materials (windows).

PHOTO CREDITS: eNJoy House Team New Jersey: first spread and 1, 2, 5, 8, 10, 11, 12, 16, 17; Jonathan T. Gann, NJIT: 15; Jason E. Kurzweil '11, NJIT: 6, 7, 9; Jed Medina, NJIT: 3, 4; Jim Tetro/U.S. Department of Energy Solar Decathlon: 13, 14

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