

RECOGNIZING THE ACCOMPLISHMENTS OF THE UNIVERSITY OF COLORADO SOLAR DECATHLON TEAM

HON. MARK UDALL

OF COLORADO

IN THE HOUSE OF REPRESENTATIVES

Thursday, October 20, 2005

Mr. UDALL of Colorado. Mr. Speaker, I rise today to recognize the accomplishments of a talented group of students from the University of Colorado who designed and built the winning entry at the Department of Energy's Second Solar Decathlon. CU's win is all the more notable because it is their second, after also winning the first Solar Decathlon competition in 2002. I am submitting for the RECORD a recent article from the Daily Camera describing the team's achievement.

The Solar Decathlon is a competition organized by the Department of Energy that gives college students an opportunity to demonstrate practical uses of solar power. This October, 18 university teams from around the country and the world competed in the second Solar Decathlon to build the most energy-efficient, solar-powered house. Each team was required to use solar energy to power the entire house, and was judged on how well its house was able to produce energy for heating, cooling, hot water, lighting, appliances, computers, and charging an electric car. The houses were also critiqued on their overall aesthetic design.

As a "zero energy home," CU's house combines advanced solar energy systems and energy efficient appliances and thus produces more energy than it consumes over the course of a year. In addition, as CU's official Decathlon handout stated, "The CU home is one that you can truly "sink your teeth into. Materials used in the home's construction and furnishings read like a health food menu," including such natural "ingredients" as soy, corn, sunflower, canola, coconut, wheat, citrus oil, and even chocolate. Using these natural materials was one of the team's five design goals, along with modularity, accessibility, innovation, and energy efficiency.

Colorado's core team consists of about 20 engineering and architecture students, among them Jeff Lyng, Frank Burkholder, Kristin Field, Mark Cruz, Drew Bailey, Jacob Uhl, Jon Previtali, Bryce Colwell, Jimmy Chambers, James Dixon, Ryan Drumm, Kathy Clegg, Geoffrey Berlin, Koki Hashimoto, Isaac Oaks, Greg Shoukas, Adam Courtney, Seth Kassels, Abby Watrous, Tim Guiterman, and Scott Horowitz. Many more students contributed in other ways. The students were assisted by faculty advisers Julee Herdt, Mike Brandemuehl, and Rick Sommerfeld.

CU's team had a challenge—to take advanced architectural and engineering concepts, put them together in a design, and build a house that could be a model of our energy future. These students met that challenge—and met it better than any of the other teams. I'm proud of these students and I'm proud that the University of Colorado produced such a talented team. Most of all, I am proud to represent these young people who are working so hard to make our way of life a sustainable one.

[From the Daily Camera, Oct. 15, 2005.

CU TEAM CLINCHES SECOND SOLAR WIN

(By Todd Neff)

The University of Colorado repeated as international Solar Decathlon champ on Friday, thanks to a combination of stubborn cloud cover in Washington, DC, and a bold decision when the outlook was particularly gray.

The CU team's 800-square-foot, solar-powered BioS(h)IP mobile home won over entries by teams from 17 universities in the United States and Puerto Rico, Canada and Spain.

"I'm shocked," winning project manager Jeff Lyng, a master's student in CU's civil engineering school, said by cell phone. "The weather held, and it was really just dumb luck that our strategy worked."

The team made its own luck. The second-ever Solar Decathlon—CU won the first title in 2002—was dogged by clouds. The CU team's energy-saving house, capable of socking away 36 kilowatt hours a day in the Colorado sunshine, could manage only about 5 kilowatt hours a day on the shadowed National Mall.

That was less than CU's and other teams needed to boil water, launder towels, refrigerate food and fuel the electric car, among other things.

The competition, sponsored by the U.S. Department of Energy, was fierce.

"There are some spectacular houses here," said Michael Brandemuehl, who with architecture professor Julee Herdt served as CU faculty advisers in both competitions. "No disrespect to the 2002 competitors, but the architectural quality is head and shoulders above what we had in 2002."

As of Tuesday morning, CU stood in eighth place. The team decided on a risky strategy: participate in a variety of competitions—where small numbers of points can be won for doing such things as boiling water and cooking meals—and run down the house's batteries.

Battery level mattered because the last of the Solar Decathlon's 10 competitions offered 100 points—of a total of 1,100 possible points—to those who generated as much energy as they used. Had the sun begun to shine, more conservative teams could have refueled and leapt past CU in the standings.

CU team ended up with 853 points, followed by Cornell University's 826 and California State Polytechnic University's 809 points.

CU won three categories: documentation, communication and "getting around," which involved team members Scott Horowitz and Isaac Oaks driving the team's electric car up to eight hours a day. They racked up 319 miles in five days at a speed of about 15 miles per hour.

"It was totally grueling," said project manager Lyng.

CU's documentation effort was bolstered by three-dimensional computer renderings showing the operation of the CU house's removable roof, done by undergraduate architecture student Mark Cruz.

The home is bio-friendly to its core, built with a raft of natural materials including everything from corn to coconut. Its defining innovation were Bio-SIPs, for which CU has applied for a patent. These structurally insulated panels are made of soybean-oil-based polyurethane, sandwiched between hard sheets of recycled paper.

Frank Burkholder, one of 20 core team members and among the dozen who made the trip to the nation's capital, said the Bio-SIPs held heat so well that the house lost just four degrees overnight.

"It saved us a lot of energy," he said.

Team faculty adviser Herdt said the home's strong "branding" as a bastion of bio-based materials probably helped in the

eyes of judges. But it was a strong student squad that made the difference, she said.

"I always ask them if they are athletes," she said. "You have to be a long-distance runner. You have to be consistent in your work and conserve energy. That's what helped this time—strategizing and staying strong all the way through."

The team's efforts got attention in high places. Lyng said Energy Secretary Samuel Bodman quipped, "I could see myself living here," when walking through the CU home.

The Department of Energy is increasing support to individual teams from \$5,000 this year to \$100,000 for the 2007 competition.

The CU solar home will host tours through Sunday on the National Mall. Its doors also will be open for tours on the CU campus following a 2,500 mile, biodiesel-fueled trek back to the Front Range. Its final destination is Prospect New Town in Longmont.

TRIBUTE TO LANCE CORPORAL
CARL L. RAINES

HON. TERRY EVERETT

OF ALABAMA

IN THE HOUSE OF REPRESENTATIVES

Thursday, October 20, 2005

Mr. EVERETT. Mr. Speaker, I rise today to pay tribute to an American hero from my congressional district who recently gave his life in defense of freedom.

Lance Corporal Carl L. Raines II, age 20, of Enterprise, Alabama, died October 6 from an improvised explosive device while conducting combat operations against enemy forces near Al Qaim, Iraq.

He was assigned to Combat Service Support Detachment 21, 2nd Force Service Support Group, II Marine Expeditionary Force, Cherry Point, North Carolina. As part of Operation Iraqi Freedom he was attached to Regimental Combat Team 2, 2nd Marine Division, II Marine Expeditionary Force.

I am very sorry to hear about the loss of Lance Corporal Raines and I pass along my condolences to his family, Mr. and Mrs. Carl Raines of Enterprise.

Lance Corporal Raines' courage and selfless service will be an inspiration, to all who treasure freedom. May our grateful Nation always honor the memory of his brave service and sacrifice.

TRIBUTE TO IRENE P. DELOS
SANTOS GONZALEZ

HON. SOLOMON P. ORTIZ

OF TEXAS

IN THE HOUSE OF REPRESENTATIVES

Thursday, October 20, 2005

Mr. ORTIZ. Mr. Speaker, I rise today to pay tribute to a true American patriot: Irene De Los Santos from Brownsville, Texas. On October 22, 2005, Ms. De Los Santos will be 99 years young. She has seen the greater part of the 20th century and has been at the forefront of numerous historical events while serving as an outstanding example for her community.

Since she had a profound understanding of what the early 20th Century was like, before women were finally given citizenship in this great Nation, and allowed to vote. As. De Los Santos cherishes this precious right and never lets an election pass her by.