



Solar Decathlon

Energy We

Can Live

With

December 2001/January 2002

Director's Note

Impressive. Exciting. Creative. Well done. These were just a few of my thoughts as I reviewed your design reports. Our village on the Mall will be so impressive to walk through. I can't wait until September!

I commend all of your hard work these past few months. Many of the design reports and drawings are very detailed and illustrative. I know they required great effort, and that effort is certainly appreciated. This is an important step in the entire process—for all of us. The feedback you receive and the information we gain will allow us to remain on course for a successful competition.

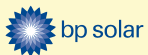
One team was not content with just handing in their report; they leveraged this qualifying step into broader community outreach to benefit their project. The University of Colorado (CU) at Boulder team held an unveiling ceremony on their campus December 12th. I had the honor of participating in this exciting event.

The CU team invited sponsors (and potential sponsors), media, industrial experts, and community leaders. (Paul Farnan, the energy advisor to their congressman, Mark Udall, and the mayor of Boulder, Will Toor, both attended). The team created ten large storyboards to explain the important aspects of their design project. They also presented a model of the house, and numerous other models that demonstrated the evolution of the design in the School of Architecture's fall design studio. The room was packed to standing room only as everyone eagerly viewed the designs and models. The anticipation was so great you could feel the energy in the room.

After all of the students were introduced, Matthew Henry, team leader of the architecture students, described the architectural design. Then, Adam Jackaway, team leader of the engineering students, described all of the engineering features. Both presentations were professional and captivating. The event ended with a question and answer period with the audience. The last and most important question came from a sponsor, "Who do I make a check out to?!" To top off this ceremony, the Boulder newspaper carried an upbeat and well-written article on the whole event the next day. Well done CU!

Again, I applaud the hard work of all the teams and I hope you all had a peaceful holiday season.

Richard King



PIX10694

The engineering and architecture students from the University of Colorado at Boulder showcase the model of their Solar Decathlon home.

Competition Infrastructure and Logistics

John Thornton and I, Byron Stafford, are leading the efforts of the Solar Decathlon organizers to provide the infrastructure you will need on the Mall in 2002. We are also overseeing the logistics of getting 14 houses built in just 4 days! These efforts include integrating the Solar Decathlon teams' homes into a village with necessities such as water, sanitation, Internet connectivity, and electric power generation and distribution as well as developing plans for the construction and disassembly of the houses. We have a lot of experience designing and staging large outdoor solar exhibits in settings such as Disney's Epcot Center, the Museum of Science and Industry in Chicago, and on the National Mall.

Our goal is to help you achieve your goals without affecting the goals of other teams. We will all need to work together. John and I talk with the National Park Service regularly to ensure that we comply with their regulations and to minimize the impact of these regulations on the teams. We will inform teams as soon as possible of decisions and regulations that may affect your design or implementation. Some of these limitations (e.g. no cranes) are already codified in the Solar Decathlon Rules and Regulations or the Questions for Clarification on the Web site.

We are developing plans for unloading and loading the equipment and houses on the Mall. It is possible that each team's house and equipment could fill more than two full-sized tractor trailers. There is not enough physical space on the Mall to accommodate all the teams' trucks at the same time. Therefore, we will have to develop a schedule for unloading and loading during the construction and disassembly phases. Please let us know who your team's point-of-contact for construction and disassembly will be. We will be talking to this contact person to develop an overall plan that meets your team's needs and is fair to everyone.

Some Thoughts for Your Team

During the competition, there are a limited number of days to construct your house and to disassemble it. Advanced planning can minimize your headaches later. Designing and constructing a house is no easy task. Making it "transportable" is even harder—but it can be done.

Here are just a few issues to consider. Visualize the loading and unloading of the equipment, wall sections, beams, and other pieces. Which item is the heaviest, the largest, the most awkward, or the most fragile? If a forklift is needed, will there be lifting channels for the forks? Where is the center of gravity? Can it be lifted from only one direction? What needs to get done first, what last? Consider the amount of space you will need for construction and disassembly because teams will only be allowed to use the area within their property lines for equipment staging. And now is the time to think about safety. Also, schedule a practice run to load and unload the difficult-to-ship items, before arriving on the Mall.

Start talking to some shipping or trucking companies now. Based on our experience, an open flatbed trailer provides the most versatility for loading and unloading. Don't rely on the truck's tarps as the only protection from dirt and water. We shipped two model homes to Epcot with only a tarp and then spent many sleepless nights repainting the homes inside and out after the truck went through a rainstorm and over muddy roads.

To prevent movement of the load during transportation, the driver will secure all of the equipment with straps or chains. Truck drivers can put a lot of tension in the tie down straps and have temporarily deformed or broken several of our weaker shipping containers.

Make sure that your house can survive the journey—talk to potential shipping or trucking companies now. Make sure your team can successfully load and unload as well as construct and disassemble your Solar Decathlon house—develop a plan now.

Byron Stafford

Updates

Transportation

Richard King has been working closely with the Ford TH!NK group to acquire electric vehicles for the Solar Decathlon. Unfortunately, the TH!NK City Car will not be available next year. Our only other alternative from the TH!NK family of vehicles is the "Neighbor." Negotiations are underway to purchase these vehicles for all Solar Decathlon teams. We will let you know as soon as possible when they will be available.

Web Sites

Thank you for your hard work on the team Web sites; each site looks unique and engaging. In October, each team received an evaluation of its Web site's compliance with code/EREN/ADA requirements. We asked each team to make the requested changes and then respond to us by November 16th. Those teams that responded by this deadline have received second compliance reviews on their sites. These sites were recently examined and then connected to the main Solar Decathlon site at http://www.eren.doe.gov/solar_decathlon/2002teams.html. If your team has not responded to the initial Web compliance review, please make your changes as soon as possible and then contact us. You will receive a second compliance review and your site will be assessed for connection to the main site. Please respond soon; we want everyone to be connected.



Keep the Information Flowing

What's the best way to increase support for your Solar Decathlon team? Tell folks about what you're doing.

Yes, talk about it and let people know about your "house-building" experience. As you move toward and begin construction, define times when it is appropriate to discuss your design and construction process with the media: such as, the time and effort you have put into the project, the challenges you face, the milestones you reach, and what you are learning. You don't want to give away all your secrets, but, in general, share your experience. By sharing your experience, you are more likely to create publicity. And a little publicity can go a long way—sometimes pulling in sponsors.

My name is John Horst and I work in public affairs for the U.S. Department of Energy's Golden Field Office, which works closely with the public affairs office of the National Renewable Energy Laboratory. Part of my work is to help the Solar Decathlon gain publicity.

I will be available to assist teams with any media questions, so feel free to contact me. In addition, I will work closely with your school to keep it informed about the Solar Decathlon.

In November, Gretchen Menand wrote to the faculty advisors requesting the names of the designated public affairs representatives of each team. (Teams should have a student publicity contact as well as a university contact.) If you haven't done so already,

Wondering About Publicity?

Contact:

John Horst

Public Affairs Specialist
DOE Golden Field Office
303-275-4709

designate a student publicity contact. This team member, who will act as a spokesperson for your team, should be able to discuss team progress openly with media outlets as well as the campus newspaper and the university public affairs department. If you don't have a university contact, call me, and we can determine who the best person to work with at your school might be. I'm here to help.

We will be encouraging local, national, and Washington, D.C., media to cover this unique competition. Please notify me of any special events you are organizing or important milestones you reach that might be of interest to the media. We plan to include pictures and video of teams' progress in the materials we provide to media. Because we want all teams to benefit from this exposure, we encourage you to document your project with video and still photos as you build your house. High-resolution (400 dpi at 8"x10") digital photos and video—if possible—are on the most wanted list. So, keep the information flowing to maximize your exposure.

I look forward to working with you.

*John Horst
Public Affairs Specialist
DOE Golden Field Office*

The Cooking Task is Heating Up

We've been busy refining the cooking-related periodic tasks and wanted to share some of our ideas with you. As stated in the rules, periodic tasks will consist of cooking food items as well as picking up and delivering items using the electric car.

Cooking, pick-up and delivery tasks will consist of the following:

- Each team will be required to prepare three meals—one each of breakfast, lunch, and dinner—for seven people (six decathletes and one official).
- Each team will also be required to drive its electric car to local grocery stores to purchase items for the required meals as well as to purchase items that will be delivered (also using the electric car) to a local soup kitchen or shelter.

Specific meal and cooking minimum requirements are as follows:

Breakfast: One hot or heated entrée and one hot beverage

Lunch: One hot or heated entrée and one chilled entrée or beverage

Dinner: One hot entrée, one heated entrée, one chilled or hot beverage, and one frozen dessert

An "entrée" is the main course of a meal. A "hot entrée" must be heated well with boiling water or to a minimum internal temperature (165°F) for safe consumption. (See the guidelines at the Center for Food Safety and Applied Nutrition and Food and Drug Administration's Web site listed on the next page.) A "heated entrée" must be heated to a temperature above ambient. For example, toast and pancakes must be heated to the center and show some browning. A "hot beverage" must be prepared with boiling water. "Chilled" food and beverages must be stored in the refrigerator. "Frozen" food must be stored in the freezer.

All heated entrées will be evaluated tactilely and visually to determine whether the task was completed. The temperatures of hot entrées that require a minimum temperature of 165°F will be verified by using a thermometer. Boiling will be verified visually.

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Suggested Foods for Cooking Tasks

Hot Entrée	Heated Entrée	Hot Beverage	Chilled	Frozen
Canned/Instant Soup, Chili, Stew or Sauce	Bagels	Coffee	Cold Cuts	Frozen Yogurt
Casseroles	Dessert Topping	Tea	Dairy Products	Ice Cream/ Ice Cream Bars
Frozen Entrée	Hash Browns	Hot Chocolate	Fruit or Fruit Salad	Popsicles
Oatmeal or Grits	Pancakes		Green Salad	Sherbet
Pasta	Pastries		Juice	Sorbets
Pizza	Popcorn		Pudding	
Potatoes	Toast/Bread		Vegetables	
Pre-cooked, Pre-packaged/Canned Meats	Waffles		Soda	
Rice				
Vegetables				

Additional Guidance for periodic tasks:

- All water used for cooking will be purchased from the grocery store in gallon containers.
- All foods and beverages labeled "refrigerate after opening" must be stored appropriately in the refrigerator or freezer.
- Raw eggs, meat, and fish will not be allowed.
- Pre-cooked, pre-packaged foods and canned meats and fish are allowed as long as they are stored and prepared according to the Center for Food Safety and Applied Nutrition (CFSAN) and the Food and Drug Administration's (FDA) recommendations. See the FDACFSAN Web site (<http://www.cfsan.fda.gov/~dms/ftcook.html>) for clarification.

- To encourage variety, an official will review meal plans before the competition begins.
- No food will be served to the general public.
- We will reimburse each team up to \$100.00 to purchase required groceries.
- Teams must provide the appliances required to prepare meals at their own expense.
- Teams not meeting the requirements of the cooking tasks will be assessed a penalty (see Penalties—Energy Penalties, Failure to Cook).

We want to encourage creativity and variety in these tasks, so please send us your feedback at solar_decathlon@nrel.gov. We will post additional information regarding these tasks on the discussion forum at http://www.eren.doe.gov/solar_decathlon/forum/solar-forum. We look forward to hearing from you.

Pamela Gray-Hann

Reminders

Email us at solar_decathlon@nrel.gov and tell us your

- point-of-contact for construction and disassembly
- feedback on the cooking task

Email John at john_horst@nrel.gov with the

- name of your student publicity contact
- name of your university publicity contact

We encourage you to use the discussion forum at www.eren.doe.gov/solar_decathlon/forum/solar-forum.

Produced for the U.S. Department of Energy by the National Renewable Energy Laboratory, a DOE national laboratory

Printed with a renewable-source ink on paper containing at least 50% wastepaper, including 20% postconsumer waste

DOE/GO-102002-1510
December 2001/January 2002