

**Energy
Challenge
2004**

**January 2004
The CHALLENGER
Newsletter**

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UPCOMING Deadlines

February 25 - List of all team members/supporters attending the competition.

- Please indicate which ones will require bus transportation. Any foreign nationals will need to fill out the NREL form available on our website or you may email energy.challenge@ipst.edu for it to be emailed to you. Please fax it to MG Whitaker at 404-894-4778 or email it to Energy Challenge.



March 17 - Deadline for Test Snowboard delivery to:

Michael Schaepe
I.P.S.T.
575 14 Street, N.W.
Atlanta, Georgia 30318

March 9 - Final Reports, Videos, Registrars Certifications and Liability Forms Due

The Final Reports are 20% and the Videos are 10% of your final scoring for the competition. Make sure that you review the criteria that you will be scored upon in the final report section of the Rules and Regulations that you can get off the webpage.

The length of the video should be 10 to 15 minutes. The preferred video format is Mini DV. VHS and DVD are also acceptable.

The video should document

1. The project team-deliberations and cooperation
2. Snowboard design and construction methods
3. Waste minimization and energy efficiency
4. Sponsor involvement
5. Safety Considerations
6. Presentation Creativity or in other words "keep the judges awake!"

Also registrar's certifications and release of liability forms (on website) are due from all team members, please send originals to MG Whitaker, Energy Challenge at IPST, 500 10th Street, N.W., Atlanta, Georgia 30318

Participants 2004

- Georgia Tech
- Lamar University
- Miami University of Ohio
- Mississippi State University
- North Carolina State University
- Pasadena City College
- Savannah College of Art and Design
- Spartan School of Aeronautics
- SUNY—Syracuse
- Temple University
- University of Central Florida
- University of Colorado-Denver
- University of Maine
- Western Michigan University

Remember there is a reduction in scores for late submissions of final papers and videos !!!!!!!!!!!!!!!

Questions and Answers

Q1: In reading the recent newsletter, I saw a section referencing the Energy Challenge Website saying that some comments had been made about the proposals that had been submitted. With regards to note 3 in that comment section, we are informed that a thin polymer sheet is considered a film and would not be allowed. However, regarding past comments that were originally given to us, comment number 18 says that "binders, synthetic fibers, polymers, adhesives, coatings and other finishing materials are permitted..." This is the information that our team originally went with and thus have already ordered and received a polyethylene type material for the top sheet and the bottom sheet of the snowboard.

From the Rules and Regs, page 9, Comment 13, Films of any form are prohibited. Thin poly sheets are films and, therefore, not allowed.

The reason the Q&A section and the Proposal Technical Comments are included in the Newsletter and on the Web Page is to catch potential problems before the day of the competition. It is fortunate that you carefully read these materials and discovered the conflict. But,

COMPETITION SAFETY ISSUES

There are 3 safety requirements for the racers!



we certainly understand the difficulty modifying of your design at this point. Add a comment to the mid-term stating that the poly film will be replaced by a polymer coating (or whatever else you decide to use). The design and construction of the snowboard can be an evolutionary process as construction, testing

and redesign progresses. The mid-term report is more about process than final product. Uncertainty in the surface treatment in the mid-term should not hurt your score so long as you describe how you plan to proceed on solving the problem.

Paper itself is hydrophilic. The paper industry has used sizing agents, polymer coatings, waxes, and resins in an attempt to "waterproof" paper products. The challenge is to find treatments that are environmentally benign and recyclable. Extra points are awarded to those teams use creative technologies to address this issue.



1. Snowboard must be tethered to the snowboarder.
2. Eye protection must be worn—either goggles or appropriate sunglasses.
3. Helmets are mandatory—if the racer does not have one they are available for rent at Winter Park

Other Competition Notes

On Friday afternoon's practice runs, you may choose to use your paper snowboard or you may use another snowboard (your own or a rental to practice on the course.

One support person per racer will be taken up the hill on the day of the race to provide support for the racer at the starting line.

You may ship your snowboard out to Colorado to:

Doug Hooker
U.S. Department of Energy
1617 Cole Boulevard
Golden, CO 80401
(303) 275-4780



Slope 1 at Winter Park

Altitude Sickness or Acute Mountain Sickness (AMS)

The base of the mountain at Winter Park Resort is over 9,000 feet with mid mountain at 10,400 feet. There is a possibility that some people may develop AMS. Drinking plenty of fluids is vital at high altitude.

Symptoms of AMS

A Headache that is accompanied by any of the following:

- Loss of appetite
- Nausea
- Fatigue/weakness
- Dizziness/lightheaded
- Difficulty sleeping
- Confusion
- Staggering gait

Anybody can get AMS, there is no prevalence based on age, gender, physical fitness or previous altitude experience

If you have these symptoms.....

Rule 1-Do not ascend any higher

Rule 2-Do not leave anyone with AMS alone

Rule 3-No alcohol, sleeping pills or narcotic pain medications

Rule 4-Treat it with lots of fluids, rest and acetaminophen or ibuprofen

Rule 5- If symptoms worsen or person can not walk a straight line- they need to descend to a lower altitude immediately.



Current Schedule (Tentative)

Thursday April 1, 2004

Arrive at Denver International Airport (DIA) prior to 1:30 PM

1:30 PM Buses depart DIA for the Marriott Denver West in Golden

3:00 PM NREL Tour

5:30 PM EC 2004 Reception

7:30 PM Hotel

Note: NREL tour is 2-2.5 hours with reception immediately following

Friday April 2, 2004

8:00 AM Leave Golden by bus for Winter Park

10:30 AM Arrive Winter Park

1:00 PM Practice on race course (3 hours)

4:30 PM Captains and Faculty Advisors meeting to discuss mid term and final report scores

6:00 PM Judges Dinner and Video Reviews

Saturday April 3, 2004

9:00 AM Team Presentation

11:00 AM Snowboard Race

2:00 PM End of Competition

2:30 PM Awards

Sunday April 4, 2004

8:00 AM Buses leaves from Winter Park to DIA



Airline Tickets

The Energy Challenge Office will arrange and pay for airline tickets for four members of the funded teams. You will be supplied with an E ticket or a paper ticket by February 13th. (note: TICKETS ARE NOT TRANSFERABLE)

We will schedule **arrivals** into Denver as close to 1:30 PM on April 1st as possible.

We will schedule **departures** not before noon on April 4th, but as close as possible to noon. For ticketing of additional team members please follow above schedule.



Critical Dates

February 25— List of all team members and supporters attending (include a copy of the team update sheet) Provide the following information
1. If they will be using the bus transportation ?
2. If they want to attend the NREL tour and dinner if space is available ?

March 9— Registrars certification and liability forms are required to have been submitted by all team members

Ground Transportation

We will provide bus transportation for all team members and faculty advisors for the following:

1. DIA to Marriott Denver West leaving the airport at 1:30 PM
2. From the Marriott to NREL and Back
3. From Marriott Denver West to Winter Park on Friday, April 2 at 8 AM
4. From Winter Park to DIA on Sunday, April 4 at 8 AM



In Winter Park— Competition Hotels provide shuttles to and from the slopes and into downtown.

The Energy Challenge will not be providing rental cars.

Note: Please keep MG Whitaker apprised of the number of team members coming from your school so that we can provide an adequate number of buses to accommodate everyone. Also contact her if there is anyone with special needs attending on your team.

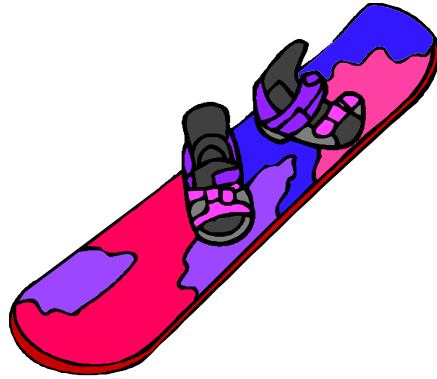
Hotels

We are providing 3 rooms for each team at the Marriott Denver West for Thursday April 1 and 3 rooms at the Super 8 in Winter Park for Friday April 2, and Saturday April 3.

(note: These rooms will be prepaid by MG Whitaker and you do not need to call the hotel for a reservation for them, but you must give MG a list of whom will be in each room)

ONLY contact the hotel if you need more than the 3 reserved rooms. Let the hotel know that you are making reservations for rooms that are in addition to those already reserved for the Energy Challenge. You will be required to pay for those additional rooms with a credit card.

There is a music festival that weekend in Winter Park and hotel rooms may become difficult to get.



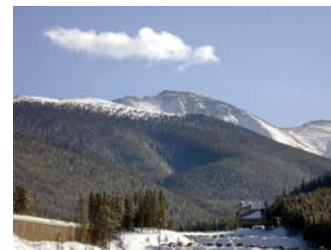
Marriott Denver West
 Golden, Colorado
 1-303-312-5448
 Rate: \$69 for 1-4 persons with 2 queenbeds (must mention Energy Challenge 04 group rate)

Super 8 Motel
 Winter Park, Colorado
 1-800-979-0332
 Rate: \$84 for 2 queen beds (mention Energy Challenge 04 group rate)
 www.wplodging.com

Vintage Hotel and Conference Center Winter Park, Colorado
 Rate: \$108 for a loft suite (murphy queen-size bed and double sleeper sofa)
 \$88 standard room (murphy queen-size bed)
 1-800-472-7017
 (mention Energy Challenge 04 group rate
 – We currently have a hold on four of the loft suites until January 31. If you want one of these you need to call and give them a credit card before they release them.)
 www.vintagehotel.com

Iron Horse Resort
 Winter Park, Colorado
 Rate: \$99 for a studio (murphy queen-size bed and double sleeper sofa)
 1-303-573-1545
 (mention Energy Challenge 04 group rate)

Your racing snowboards may be shipped to the DOE in Golden so that you do not have to travel with them. Specific instructions are on page 3 of the newsletter



Additional Travel Related Information

Lift tickets

We will provide one 2 day lift ticket for each team's designated racer. We are trying to work out making additional discounted lift tickets available for purchase by Energy Challenge participants and supporters. We will have additional information in the January newsletter.

Meals

We will provide meals for the 4 official team representatives. We will have drinks and granola bars available on the buses, at the presentations and in the meetings for all participants.



**Snowboard design
competition**

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**ENERGY CHALLENGE
2004**

We're on the web!
www.ipst.edu/energy_challenge

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