



SOLAR CAR CHALLENGE[®]

HOSTED BY



EARTH DAY
TEXAS



NATURE OF THE COMPETITION

GOAL OF THE SOLAR CAR CHALLENGE

The Solar Car Challenge is designed to help motivate students in Science, Engineering, Technology, and Alternative Energy. The Solar Car Challenge Education Program teaches high school students how to plan, design, engineer, build, and safely drive a roadworthy solar car.

EVENT OBJECTIVE

Teams experience the fun of the 2017 Solar Car Challenge by driving four days at the world famous Texas Motor Speedway. Car breakdowns, variations in weather, track conditions, and team experience limit the number of miles a team can drive each day. The team driving the most miles accumulated over the 4 days of the event will be declared the winner in each racing division.

SOLAR CAR CATEGORIES

The purpose of the Solar Car Challenge is to provide a level playing-field for high school solar car teams. Newer teams generally enter the **Classic Division** which requires participants to use less expensive conventional motors, lead acid batteries, and less efficient solar cells. Older teams enter the **Advanced Division** based on their use of more expensive technologies, advanced aerodynamic bodies, and exotic batteries. The new **Electric-Solar Powered Division** seeks to bring reality to solar car racing by incorporating a stationary solar array, and a two-passenger vehicle capable of urban driving.

ADMISSION INTO THE RACE

Teams seeking admission to the event must register their vehicle and demonstrate that their solar car complies with all the rules during a qualifying process known as "Scrutineering." Race Officials want to see that participants understand their mechanical and electrical designs, and are capable of discussing their work in an oral presentation before a panel of judges. In cross-country races, teams are licensed in Texas as **experimental vehicles**, and carry liability insurance.

SAFETY & SUPERVISION

Each car must have a roll cage, "crush zones," safety harness, horn, communications, turn signals, and a fire extinguisher. Chase vehicles and trailers are available for support in the event of a breakdown on the track. All aspects of the Solar Car Challenge Rules are closely monitored.

THE SOLAR CAR CHALLENGE EDUCATION PROGRAM

The Solar Car Challenge is the product of the Foundation's Solar Education Program. The Solar Car Challenge Foundation provides a high school solar car education program including workshops, web casts, curriculum materials, mentoring, and on-site visits. More than 45,000 students in 32 states have been challenged by this education program. The Solar Car Challenge is recognized by the IRS as a 501(c)(3) non-profit education foundation.

PROJECT PLANNING CALENDAR 2016-2017

SEPTEMBER 10, 2016

NEW TEAMS WORKSHOP – designed to help teams organize their project, and to receive mini-courses in mechanical and electrical engineering for the project.

SEPTEMBER, 2016

Teams will organize their team and begin planning their project. This includes the development of a Construction Calendar, a Financial Budget, and a preliminary oral presentation for potential sponsors and guests.

EARLY OCTOBER, 2016

Develop promotional materials that incorporate the team's racing goal, a preliminary design of their solar car, a preliminary budget, and a concrete timeline for construction. Include photos of the team during planning sessions.

OCTOBER 15, 2016

SOURCES WORKSHOP – designed to help with funding sources, and parts supplier sources.

LATE OCTOBER, 2016

Teams should begin fundraising using their developed promotional materials, designs, budget, and a refined oral presentation setting out the team plan. Teams should not expect sponsors to contribute to their project unless the team is capable of talking about their plan!

Teams should develop a preliminary "purchasing plan" setting out what the team needs to buy, accompanied by a calendar setting out when the team can realistically receive the materials.

NOVEMBER, 2016

Begin the purchase of materials for the construction of your solar car.

DECEMBER, 2016 – MARCH, 2017

MAJOR BUILDING CYCLE

Suggestion: Build your solar car first with cardboard, wood, or plastic tubing so that you can check spatial arrangements, driver access and egress, and safety issues

JANUARY 14 - 15, 2017

SPECIALTY WORKSHOP – designed to help teams with the development of their solar car

APRIL, 2017

Save this month to re-engineer your solar car in the event that your original design does not work as planned.

MAY-JUNE, 2017

Test-drive your solar car. You shouldn't bring a solar car to the race without putting 500 miles on your vehicle. You want the solar car to "fail" at your testing area, not at the Texas Motor Speedway.

JULY 16-18, 2017 ▪ SCRUTINEERING

JULY 19-22, 2017

SOLAR CAR RACING at the world famous Texas Motor Speedway



EARTH DAY™ TEXAS

TEXAS MOTOR SPEEDWAY

TRAMMELL S. CROW

THE LIGHTNER-SAMS FOUNDATION

**KAHN EDUCATION
FOUNDATION**

LOCKHEED-MARTIN

RYDER TRUCKS

NBCDFW

DALLAS MAVERICKS

**SAM PACK'S FIVE STAR FORD -
PLANO**

**WEATHER DECISIONS
TECHNOLOGIES**

SEAGATE TECHNOLOGIES

TEXAS SOLAR ENERGY SOCIETY

HEWLETT PACKARD ENTERPRISE

B12 CONSULTING

MICHELIN TIRES

**DFW MARRIOTT &
GOLF CLUB**

**Bank of America Foundation
Lehman Marks
Capitol One Foundation
William Shih
Verizon Foundation
Chris & Meredith Jones**

**S. Lee Cabe
Michael & Marci Foree
Guntis Terauds
Russell & Renda Carter
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