



## THE 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 2019 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 60,000 students in 37 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.