

2024 SOLAR CAR CHALLENGE

Building Engineers for the Future

www.solarcarchallenge.org



2024 SOLAR CAR CHALLENGE



SPONSORSHIP PACKAGE

SOLAR CAR CHALLENGE FOUNDATION
Building Engineers for the Future

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“ With your help, we can build the young scientists, engineers, and leaders of the future. Help us motivate high school students in the top project-based STEM initiative.

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SOLAR CAR CHALLENGE RACE

The Solar Car Challenge Foundation organizes an annual solar car competition that brings together high school students from across the United States and around the world. Participants are tasked with designing, building, and racing solar-powered cars, pushing the boundaries of engineering and renewable energy utilization. The competition serves not only as a platform for students to showcase their technical skills, but also encourages teamwork problem solving, and critical thinking.

Over a 15-month education cycle, students learn through the Solar Car Challenge Foundation's educational program that includes hands-on workshops, virtual learning videos, curriculum materials, and on-site visits across the country. Through the progression of learning, students engineer, troubleshoot, repair, drive and evaluate their roadworthy solar cars powered exclusively by the sun.

At the culmination of each 15-month education cycle, the teams travel to Fort Worth, Texas to participate in the Solar Car Challenge Race. On even-numbered years, the race is held at NASCAR's Texas Motor Speedway; On odd-numbered years, the race takes place cross country.

The Solar Car Challenge Foundation provides educational programs to inspire the next generation of innovative minds. By fostering a passion for learning, encouraging curiosity, and empowering students with life skills, we're building a community of future engineers who are not only productive contributors in our communities, but also champions of sustainability.



The Solar Car Challenge presents a unique experience for High School students to explore different perspectives of STEM. The program helps develop hands-on knowledge outside of the classroom while delivering high quality learning experiences.

~ Lloyd Kwan La Canada Engineering Club California



AWARDS & RECOGNITION



2023 NBCUniversal Foundation Award

The Solar Car Challenge Foundation has been honored with a **Local Impact Grant** for its exceptional dedication to making a positive impact in the North Texas Education Community. This grant recognizes the foundation's efforts in enhancing STEM education and empowering youth. The prestigious recognition comes from the **NBCUniversal Foundation**, an organization that provides support and funding to nonprofit organizations striving to improve their local communities through creative and groundbreaking programs. This award highlights the foundation's commitment to driving innovation and inspiring young minds.



Technology & Learning Magazine America's Top 10 Innovative Education Programs!

The Solar Car Challenge is proud to be featured in **Technology & Learning** Magazine's esteemed list of **America's Top 10 Innovative Education Programs!** With an overwhelming number of programs to choose from, ranging from cutting-edge advancements to accessible options for beginners, the editors at T&L faced a challenge setting the criteria. The result - A Top 10 List comprised of a unique collection of programs all sharing the common elements - authenticity, collaboration, and the cultivation of critical thinking skills. Each program also explores global implications, delve into in-depth investigations, and foster high levels of student engagement. Collectively, the Top 10 exemplify how 21st-century technologies are reshaping the traditional concept of education in the classroom.



If we want a stronger, home-grown, human resource, we absolutely need to offer opportunities like the Solar Car Challenge to our students. Hands-on / Minds-on projects are making a difference for our next generation of engineers and scientists and we must do everything we can to support them.

~ Mark Westlake
Saint Thomas Academy / Experimental Vehicle Team

SOLAR CAR CHALLENGE FOUNDATION



Welcome to the Solar Car Challenge Foundation, where Education, Innovation, and a Sustainable Future collide!

The Foundation was established in 1993 as a 501c3 educational organization with its roots dating back to 1989. At that time, our Founder - Dr. Lehman Marks held the position - 'Head of Science' at the Winston School in Dallas, Texas with an idea to initiate a learning program that would inspire students to explore the potential of renewable energy and sustainable transportation. As a passionate educator, Dr. Marks recognized that designing a program around **STEM-based education** (Science, Technology, Engineering and Mathematics) would gain traction and result in increased student engagement if it was designed to include ongoing hands-on learning opportunities that would encourage students to feel empowered, while also stimulating their curiosity to truly want to learn more. Today the great success of what started with an idea leading to the formation of the first high school solar car team and a project requiring the team to design and construct a solar powered car has evolved into a National Educational Program and an annual Solar Car Challenge Race supported and funded by what is now known as the Solar Car Challenge Foundation.

The Vision of the Solar Car Challenge is clear: emphasizing sustainable transportation and the role of renewable energy in reducing carbon emissions and combating climate change. By showcasing the potential of solar power as a viable and clean energy source, the Foundation inspires students to think creatively about the future of transportation and its impact on the environment. The experience of participating in the Solar Car Challenge ignite students' passion for becoming change-makers and environmental stewards.

But it's not just about the cars—it's about **Education** and The Solar Car Challenge Foundation promotes STEM education like no other organization effectively reaching students and educators across the globe. Our primary goal through STEM education and building solar-powered cars is to influence students interest and aptitude in science, technology, engineering, and mathematics. The Solar Car Challenge Foundation has made a significant impact on the lives of countless students. Participating in the competition enables students to apply their classroom knowledge to real-world challenges, fostering a sense of achievement and confidence. It also opens doors to higher education and career opportunities in STEM-related fields, as many participants go on to pursue further studies or careers in engineering, renewable energy, and related disciplines resulting in making contributions in their own local communities.

The Solar Car Foundation represents a vibrant and inclusive community where we play a crucial role in promoting renewable energy, inspiring students, and advancing STEM education. We value diversity, every voice and perspective for inclusion, offering equal opportunities for students (from all backgrounds) and educators (from any size school) to participate and learn. Through its annual solar car competition and ongoing support for schools, the Foundation fosters collaboration between students, teachers, and industry professionals providing valuable mentorship and networking opportunities. By students learning about alternative energy and harnessing the power of the sun to propel solar-powered vehicles, these young innovators are driving us towards a more sustainable and greener future.

The Solar Car Challenge Foundation truly embodies the spirit of innovation, education, and environmental stewardship.



FOUNDATION VOLUNTEERS

FOUNDATION FUNDING & SUPPORT

MEET OUR TEAM OF VOLUNTEERS

SOLAR CAR CHALLENGE FOUNDATION



The Solar Car Challenge is based on volunteer support, including over 60 people from around the country who serve as judges & staff during the racing event. This, along with Team Advisers, Race Interns, and Community Involvement, provides the backbone of support for the Solar Car Challenge Education Program.

- Foundation President
- Foundation Board Members
- Technology Board Members
- Advisory Committee Members
- Operations Personnel
- Solar Car Challenge Race Directors and Support Staff
- Teaching Consultants
- Professionals from within the community / STEM career

What's more, there is active support from our Sponsors, such as Lockheed Martin, who share their support with upwards of 30 volunteers. We welcome all individuals within local communities to participate and to get involved!

SPONSORSHIP

Foundation funds are solely raised through Sponsorship and Gifts-in-Kind. 100% of monies raised are invested directly into the Foundation's Education Program and The Solar Car Challenge Race.

NON-MONETARY SUPPORT

Donated Services and Resources are greatly appreciated. As well, our volunteers are invaluable! Without volunteers, we would not be able to provide the educational programs or hands-on experiences we continue to develop and share through our communities.

INVESTMENTS IN TECHNOLOGY

Keeping updated with the latest technology is extremely important. An example can be seen through our Technology Board efforts to design all of the software / hardware used in scoring and tracking teams during the Solar Car Challenge Race. This investment allows us to be able to teach teams how to establish telemetry.

PARTNERED COLLABORATION

The Foundation is a community of individuals that volunteer their time, expertise and shared knowledge. Workshops and virtual learning experiences allow our teaching volunteers and expert consultants to collaborate and share information. An example is Solar Teams learning about exploring NEW technology. As a result, teams are utilizing lithium iron phosphate batteries, 28% efficient solar cells, and high-tech telemetry systems.

BOARD MEMBERS • EDUCATORS • FORMER STUDENTS • RACE FANS!



Dr. Lehman Marks
Foundation President
Race Director
University of Texas (Austin)
Tulane University



William Shih
Foundation Board Member
Deputy Race Director
University of Southern California



Chris Jones
Foundation Board Member
Chief Race Judge
California State Polytechnic University (Pomona)



Jarrett Dunn
Foundation Board Member
Race Operations Manager
Georgia Tech University



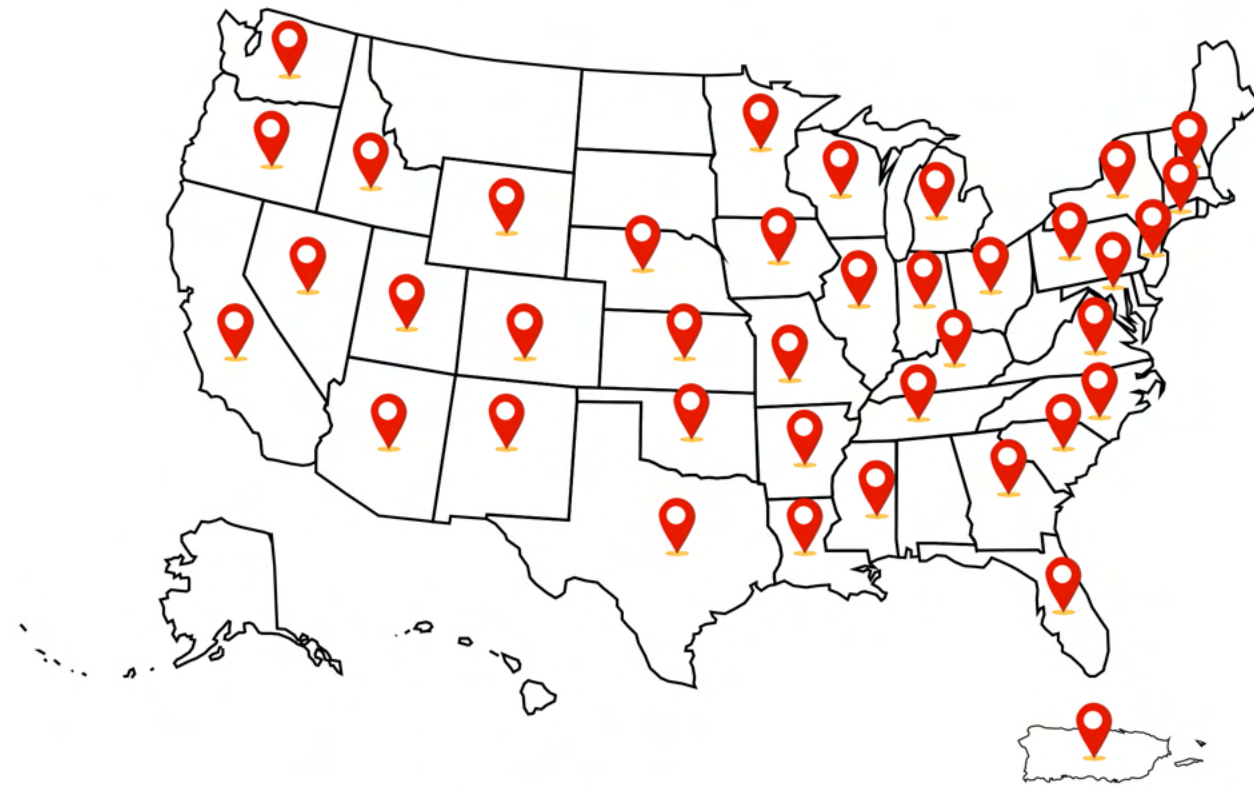
Michael Foree
Foundation Board Member
Rice University

“The Solar Car Challenge is one of the most wholesome, hands-on and practical educational programs I've ever had the pleasure to be a part of, speaking as a volunteer staff member and team judge of 8 years. Students learn, compete and grow together while raising awareness about the environment. The technical and engineering skills, teamwork, discipline and work-ethic gained through this program sets each one of these sharp students for a great adult life. I comprehensively recommend this program for any high school student nationwide to get a head-start in an engineering or technical field.










~ Matt Smith
Volunteer & Judge
Supporting & Serving the the SCC for Many Years



SOLAR CAR CHALLENGE FOUNDATION



UNITED STATES - 40 STATES + PUERTO RICO
GLOBAL PARTICIPATION - 9 COUNTRIES

- | | | |
|--|--|--|
|  <u>United States</u> |  <u>Hong Kong</u> |  <u>Spain</u> |
|  <u>Canada</u> |  <u>Mexico</u> |  <u>The Bahamas</u> |
|  <u>Costa Rica</u> |  <u>Singapore</u> |  <u>Uzbekistan</u> |

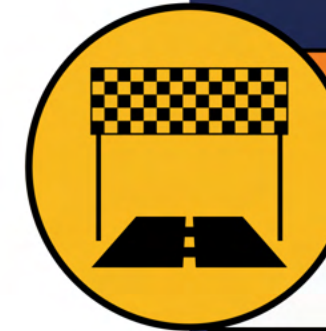
**represents states & countries that have participated and/or have utilized the Solar Education Program in their curriculums for teaching*

ANNUAL ENGAGEMENT



45
REGISTERED SOLAR CAR TEAMS

45 Teams are registered with the 'Intent-to-Race'. This is a commitment to actively participate in educational workshops, hands-on learning, and to engage in opportunities promoting life skills.



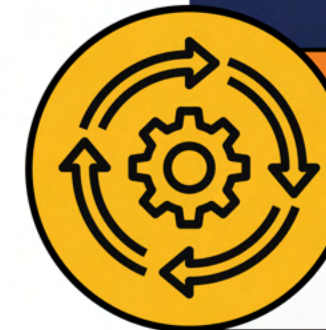
600 - 900
SOLAR CAR CHALLENGE RACE

600 - 900 Students & Teachers travel to participate in the Solar Car Challenge Race each year. This number continues to grow as schools invest in the program and form new solar teams.



10,000 - 20,000
ANNUAL SCHOOL OUTREACH

The Solar Education Program reaches between 10,000 - 20,000 people annually through the school participation, sponsored learning events and outreach promoting the solar program.



261
HIGH SCHOOL SOLAR PROJECTS

There are currently 261 High Schools in the USA (and beyond on a global level) that are utilizing various levels and aspects of the Solar Education Program into their own curriculum & projects.

LEARNING OPPORTUNITIES

- Mechanical Engineering
- Electrical Engineering
- Battery Technology
- Materials Technology
- Aerodynamics
- Telemetry
- Data Analysis
- Shop Skills (welding, soldering, metal construction)

LIFE SKILLS

- Fundraising
- Budgeting
- Project Planning
- Logistical Skills
- Goal Setting
- Public Relations
- Work Ethic
- Collaboration
- Discipline
- Teamwork
- Sportsmanship
- Interpersonal Skills



SOLAR CAR CHALLENGE RACE THE STUDENT EXPERIENCE



STUDENTS SHARE THEIR EXPERIENCES!

The following are responses to a survey sent out to PAST Solar Car Challenge participants to gain feedback as to how the Solar Education Program and their experiences influenced their lives.

- 100% of respondents said the Solar Car Challenge helped them learn how to apply STEM to real-world problems
- 80% of respondents earned a degree in STEM and are in a STEM career
- 75% of respondents said the Solar Car Challenge influenced their educational or career path
- 55% of respondents have used solar energy outside of the Solar Car Challenge



I truly believe the SCC experience was foundational not only to my education, but to the entire course of my life. It started me on a path to selecting my major and specialization, encouraged me to start my own solar car team in college, built a foundation in electrical engineering that still helps me to this day more than a college course ever could, taught me invaluable leadership skills, and molded my outlook on renewable energies and sustainability. Also, perhaps equally as important, it was FUN. So, I developed all of the great life skills while making friends, building confidence, and gaining meaning during a transformative time of life. That, to me, is an intangible underappreciated immeasurable benefit the SCC experience had on my life"

*~ Former Solar Car Team Member
Response included in Race Survey*



I was on the Winston team in early 2000 - back when it was the Winston Solar Car Challenge. The great thing about being a part of this was not just that we learned great engineering and problem-solving skills, but because we raised the money ourselves, taught other schools how to start their team, hosted the race and a multistage science fair - We learned fundraising skills, budgeting skills, logistical skills, management skills, and interpersonal skills. It was one of the best experiences in my academic life and prepared me for the many projects I would later work on. 10/10 I would do it again!

*~ James Lentzsch
2002 Winston Solar Car Team Member*

JOIN US ON A JOURNEY OF DISCOVERY AND KNOWLEDGE!

By becoming a sponsor of the Solar Car Challenge Foundation, you can play a pivotal role in shaping the minds of future innovators and leaders. Together, let's empower students, transform education, and create a sustainable world powered by renewable energy.

To ensure the success of this program, we rely on the generous support of sponsors and donors like you. Every dollar raised goes directly into funding the Solar Car Challenge, allowing us to offer workshops, curriculum materials, team assistance, and much more. Your contributions make a significant impact and help us continue to inspire and educate the next generation of innovators.

Reach out with any questions OR to learn more about additional ways you can support The Solar Car Foundation.



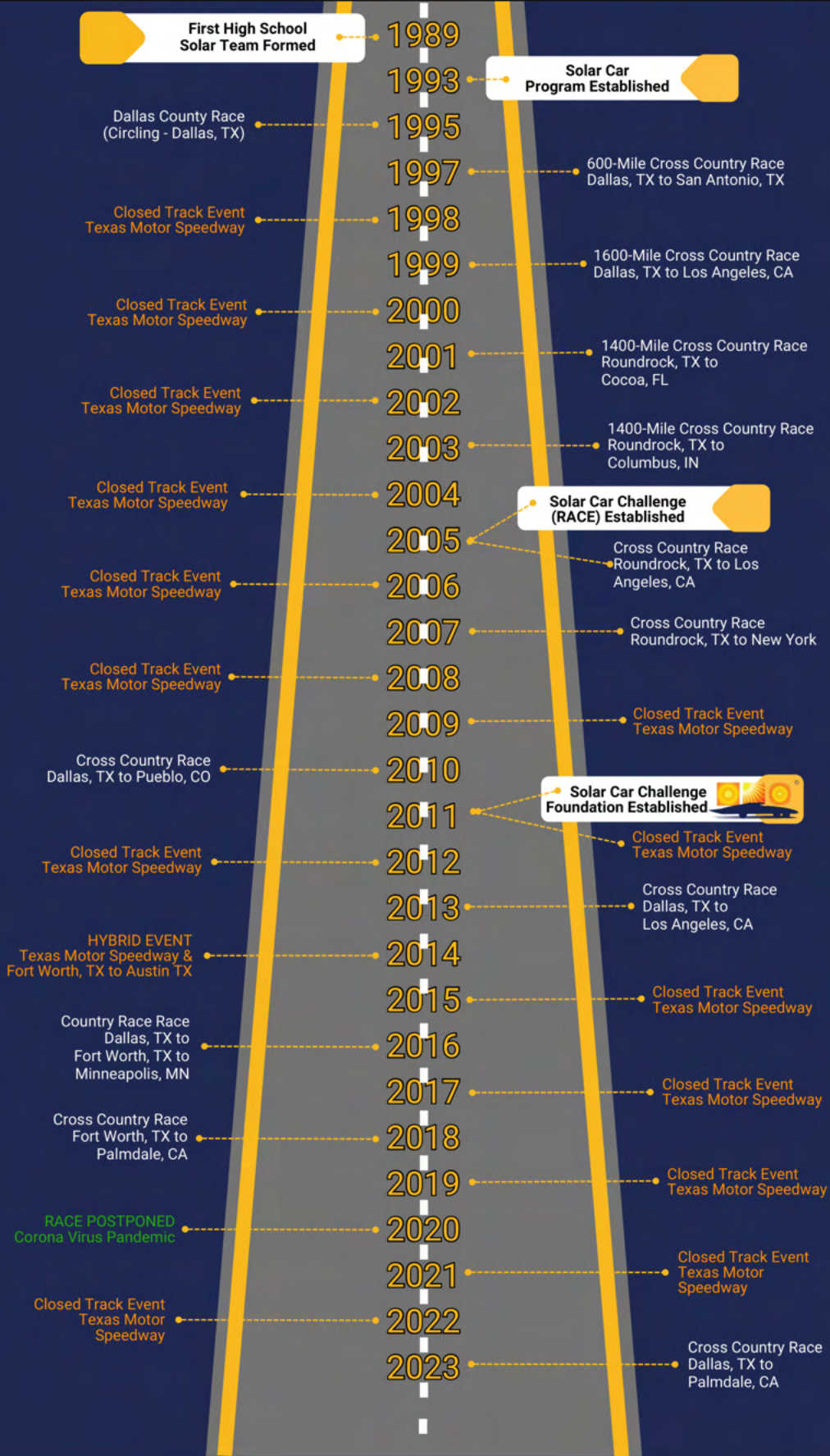
YOUR DONATIONS MAKE A DIFFERENCE!

Dr. Lehman Marks
Solar Car Challenge
Founder & Event Coordinator
PH: 214.587.8489
EM: LehmanM743@AOL.com

SPONSORSHIP LEVELS

	RACE FANS	SPEEDWAY SUPPORTERS	FINISH LINE FRIENDS	SILVER	GOLD	LIVE STREAM	PLATINUM	TITANIUM
SPONSOR CONTRIBUTION								
	IN-KIND DONATION	\$ 1,000.00	\$ 1,500.00	\$ 5,000.00	\$ 7,500.00	\$ 10,000.00	\$ 12,000.00	\$ 25,000.00
HONORED SPONSORS								
Sponsorship Association								Name Associated with RACE Name
Personal Appearances by Solar Car Team for Sponsors								✓
Official Sponsor of the Solar Car Challenge					✓	✓	✓	✓
Honored Guest at Solar Car Challenge Banquet				✓	✓	✓	✓	✓
PR & MEDIA EVENTS								
Sponsors Honored at Media Day Event							✓	✓
Sponsors Honored at Press Events							Sponsor Signage	Sponsor Signage
Sponsors Honored at Promotional Events							✓	✓
Included in Press Releases					✓	✓	✓	✓
Honored at Press Conferences							✓	✓
LIVE STREAM								
Live Stream						Name / Logo on Live Stream		
MARKETING								
Logo on Solar Car							✓	✓
Logo on Team Trailer								✓
Logo on Website		✓	✓	✓	✓	✓	✓	✓
Logo on Official Race Booklet		✓	✓	✓	✓	✓	✓	✓
Logo on Publicity Materials			✓	✓	✓	✓	✓	✓
Race Event Signage					Appropriate Signage	✓	✓	✓
RACE DAY EVENTS								
Invitation on Race Day Start the Race & 'Wave the Green Flag'							✓	✓

35 YEAR HISTORY SOLAR CAR CHALLENGE



SOLAR CAR CHALLENGE FOUNDATION ACCOMPLISHMENTS

The Solar Car Challenge Foundation is proud of our many accomplishments. The following represents our most recent achievements, Initiatives and efforts to expand our outreach. We have a passion to educate students and continue to develop STEM-based programs that will inspire and motivate young minds. We invite you to get involved as a Foundation Donor!

★ Achievements

2023 Solar Car Challenge, a cross-country race from Fort Worth, Texas to Palmdale California. Six hundred students, teachers, and staff traveled to Texas to share 3 days of “qualifying” and four days of racing.

★ Six Education Workshops designed to encourage Science, Engineering, and Alternative Energy. This is our primary education outreach for new and existing teams.

★ Added six new states to the Solar Car Challenge (Idaho, Ohio, Georgia, Connecticut, Maryland and New Jersey).

★ Twenty-three teams registered to race in 2023

★ Formed twenty-one new teams in preparation for the 2024 Solar Car Challenge - a closed-track race at the Texas Motor Speedway.



★ Eight Solar Car Teams took part in displays across the Metroplex helping support the NTREG Solar Tour.

★ Five Solar Car Teams displayed their vehicles at the NTCOG Electric Vehicle Project.

★ Hosted the January, three-day Specialty Workshop for both new and existing solar car teams.

★ Hosted 12 virtual learning workshops

★ Cruiser Division Debut

We introduced the new Cruiser Division in 2020. These unique cars demonstrate a realistic application of solar technology within a sedan-style vehicle. The Cruiser Division will carry four passengers with the solar arrays integrated into the body of the vehicle. This new vehicle made its debut at the 2022 Race.

★ Middle School Initiative

We are continuing our outreach to younger students. The 2022 - 2023 Solar Car Challenge Education Program expands our Middle School Initiative designed to encourage greater interest in Science, Engineering and Alternative Energy.

★ Technology Initiatives

We are delighted to partner with Texas Instruments, Siemens, Lockheed Martin and Onco to provide technology support for the teams / students taking part in the 2024 Solar Car Challenge.

The Solar Car Challenge Technology Board continues to make great strides improving the software programs need to track & score the race, and assist teams with telemetry, suspension and power management.

