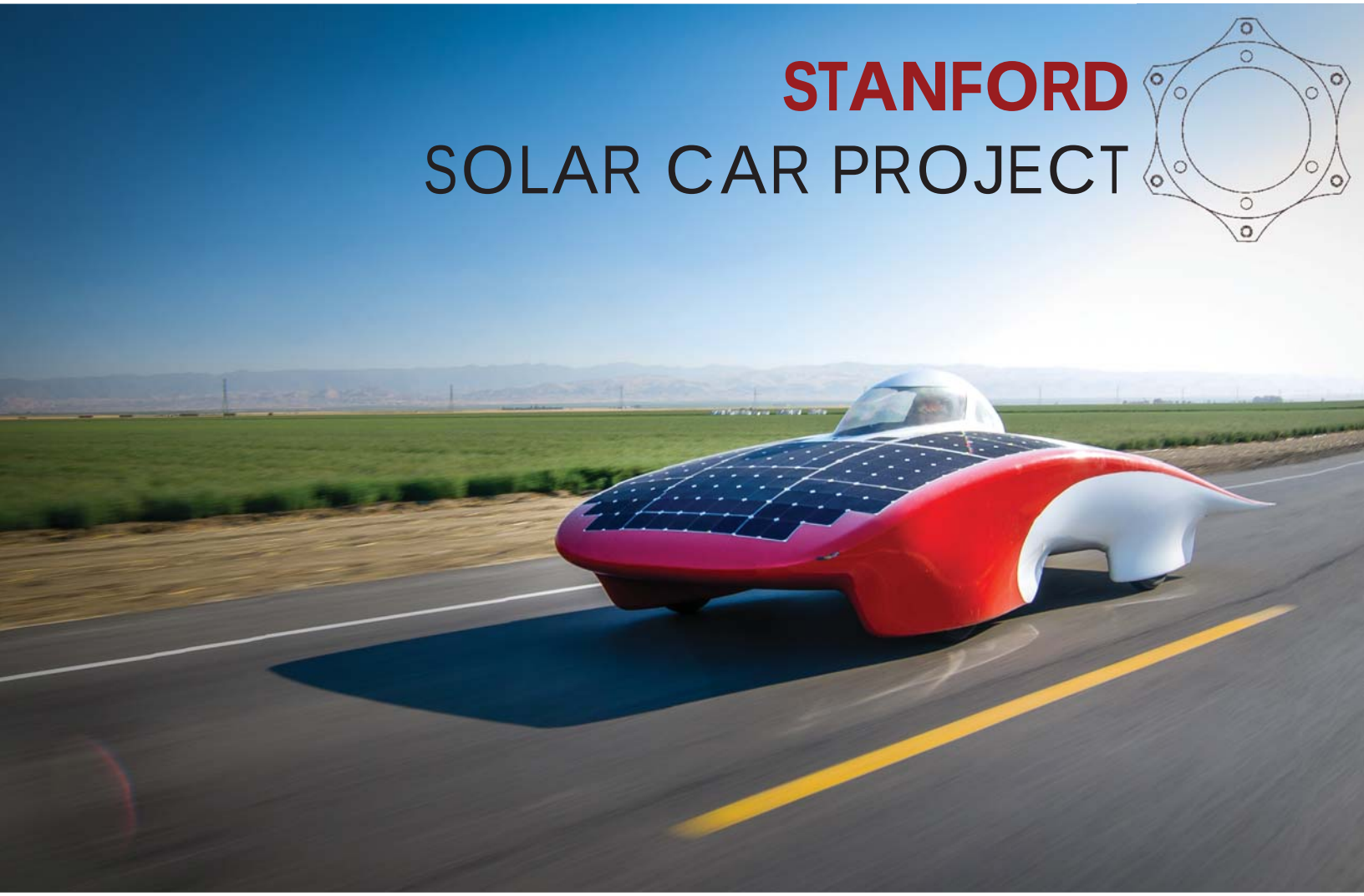
STANFORD
SOLAR CAR PROJECT



A Note from our Team Leaders

STANFORD SOLAR CAR PROJECT

Dear Prospective Sponsor,

Allow us to introduce the Stanford Solar Car Project (SSCP).

SSCP is among the most advanced, exciting, dynamic, and publicized solar initiatives. Solar car racing brings together a select group of young, dedicated engineering minds, researchers, and corporate sponsors with the ultimate goal of competing in solar-powered races.

SSCP participates in two major events. The World Solar Challenge is a race across the Australian Outbac and the most recent iteration of the North American Solar Challenge is a 2500 mile cross-country race from Texas to Chicago. Both biennial events attract corporations and educational institutions from around the world.

In response to today's energy issues, the Stanford Solar Car Project actively pursues alternative solutions in solar-electric technology, helping to develop energy options for the future. Our goal is to design, build, and race a car capable of crossing the Australian Outback and the United States mainland at the fastest speed possible, using only sunlight as fuel.

In the past, we have traveled to Japan, driven multiple times across the Australian Outback, and raced from Chicago to Los Angeles. Our 2005 car Solstice clocked the fastest stock-class time ever in a North American solar endurance event. In 2011, Xenith, the most technically-ambitious car the team has ever built, crossed Australia in the World Solar Challenge, earning us 4th place in our class. In 2013, our most recent car, Luminos, placed 4th overall, making it the fastest American solar car and additionally the most successful car produced in SSCP's 24 year history. We are now preparing to begin another cycle leading up to the 2015 World Solar Challenge.

SSCP offers dozens of Stanford students hands-on engineering experience and provides sponsors an opportunity to support education and environment initiatives while establishing relationships with future Stanford alumni.

We at the Stanford Solar Car Project seek to establish long-term relationships with our sponsors. We encourage you to contact the team with any questions and let us know how we may accommodate your needs. We invite you to join us in our endeavor.

Thank you for your time and consideration.

Guillermo Gomez
Stanford Solar Car Project Team Leader

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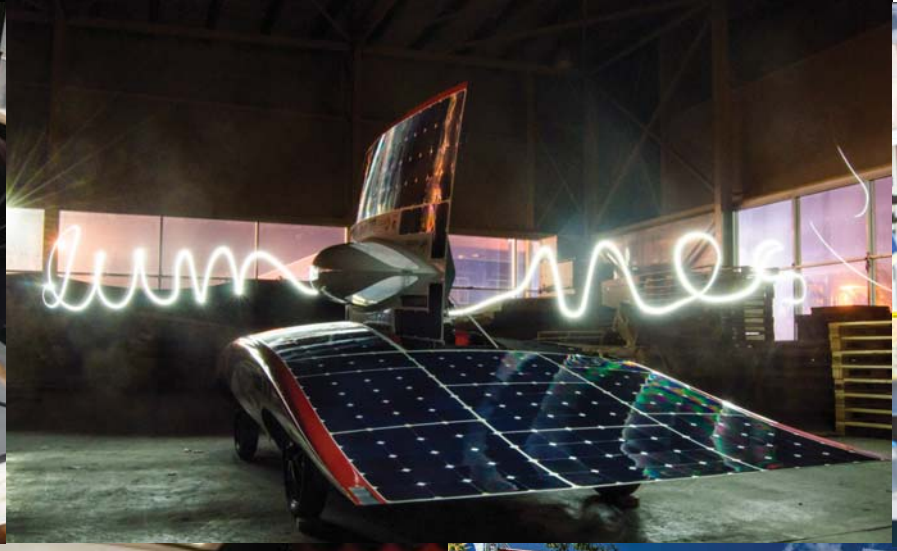


About the Stanford Solar Car Project

The Stanford Solar Car Project is America's preeminent solar car team. The project began in 1989 and is an entirely student-run, non-profit organization fueled by its members' passion for environmentally sustainable technology. The team designs and builds solar-powered cars to race in the 2000 mile-long World Solar Challenge in the Australian Outback. We provide a unique opportunity for Stanford students to gain valuable hands-on engineering and business experience while raising community awareness of clean energy vehicles. The team generally operates on a two-year design and build cycle and enters the finished car in a cross-continental solar race.

Members usually join SSCP as undergraduates with little to no engineering background and gradually build their knowledge while working on a vehicle. Coordinating a project of this magnitude also requires considerable management and planning, allowing students to develop these vital business skills in an engineering environment. With this approach, the team has fostered ten generations of award-winning vehicles, proving that a hands-on education in creative design and execution produces impressive results.

Members who graduate from SSCP go on to work with some of the most cutting-edge technologies and firms today, such as Tesla Motors, Google [X], Boeing, Goldman Sachs, Apple, and other companies they had encountered through the SSCP as undergrads. Even in fields as diverse as cancer therapeutics research and software marketing, former team members are at work, leveraging many skills they first developed working with SSCP.

How does a solar car work?

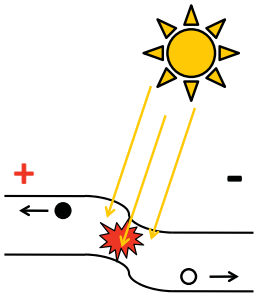
Driver Control & Steering

Wheel Assembly & Brakes

Composite Body

When light hits our solar cells, it energizes electrons, creating a voltage for the car's electrical circuit. Some of those electrons go straight to our motor controller and motor, generating the power needed to propel the car forward. Any extra energy is used to charge our state-of-the-art battery pack. When there isn't enough light to run our motor off of the solar array alone, the batteries provide power to the motor and car electronics, allowing it to drive up to 200 miles without any sun.

Solar Panels

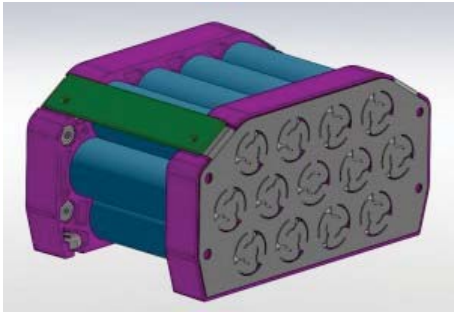


Solar panels are composed of many individual solar cells. Each cell is like an LED in reverse. Instead of using power to create light, it uses light to drive power through a circuit.

A solar cell is a diode where free charge carrier pairs are generated by a photon impact. Those free carriers are swept away by the intrinsic electric field within the device to generate a current.

Solar cars usually use two distinct types of solar panels. Some teams use terrestrial silicon-based panels, while other teams use triple junction "space," cells intended for orbital satellites.

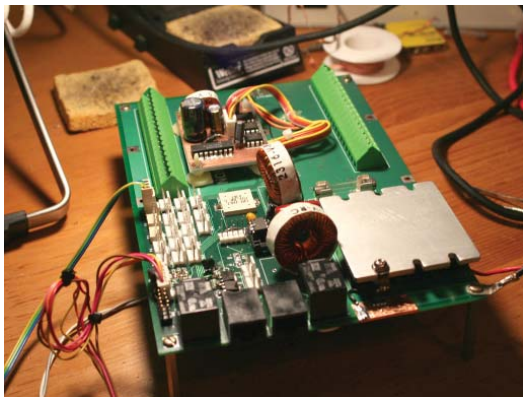
Lithium Batteries



Lithium batteries smooth out the power produced by the solar panels. If there is an excess of energy, the batteries store it for use during the night or during bad weather. If there is a deficiency, the batteries provide the energy to keep the car moving.

Luminos' battery pack can power a hair dryer for about four hours, or drive the car for about 200 miles. At California utility rates, it would cost about $0.75 to charge up the pack.

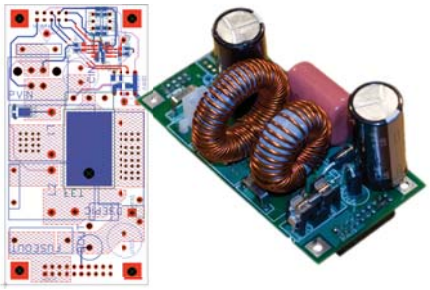
Carbon Fiber Monocoque Chassis



Battery Protection System (BPS)

Suspension

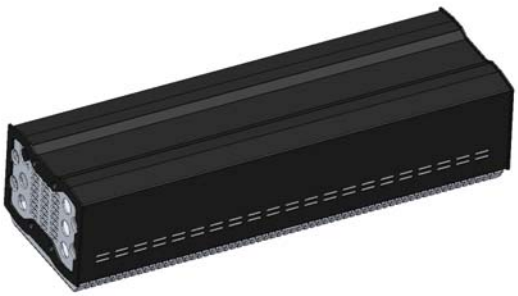
There are a host of electronics designed to process this energy and use it in the most efficient way possible. In-house designed maximum power point trackers ensure that the solar cells are operating at their optimum point. The battery protection system protects our batteries from damage during charging. During the race, the telemetry system allows the team to monitor the status of the electrical system in real time. Essentially, our solar car is an extraordinary electric vehicle with a solar charger. At today's energy prices, our car gets the economic equivalent of about 1250 mpg.



Maximum Power Point Trackers

Maximum power point trackers trace the output characteristics of the solar panels and ensure that they are always operating where they are maximally efficient. This ensures that the car can go as fast as possible, regardless of the weather conditions.

MPPTs also match the solar panel voltage to the battery pack voltage, thus freeing up the design to optimize for multiple parameters like motor efficiency and partial shading of the array.



Motor Controller

The motor controller performs the inversion from the DC battery pack to the three-phase AC of the motor. It also controls the torque and speed, and can even change the mode of operation of the motor so that it charges the batteries under braking, recovering energy usually lost when slowing down.

SunSurfer, SSCP's first vehicle, placed 7th in the 1990 Sunrayce, the first North American Solar Endurance Event.

AfterBurner II, SSCP's third vehicle, took 3rd place overall in the 1997 Sunrayce in the United States.

Back2Back Burner, the team's sixth vehicle placed 2nd in the two-seater class of NASC 2003.

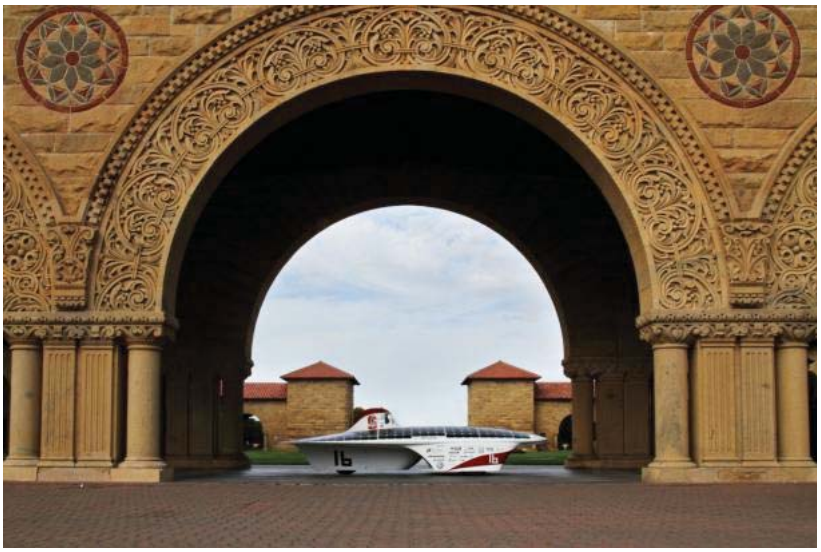
1989 | 1990 | 1991 | 1997 | 2001 | 2003

Projects like the solar car provide a tremendous hands-on experience for our students in the practical aspects of engineering, working in teams and in project management. With very modest resources, but tremendous enthusiasm, the team shows year after year what is possible...what our students have achieved and will achieve in the future.

Dr. James D. Plummer
Dean, Stanford School of Engineering

Participating in the Stanford Solar Car Project was a wonderful experience for me that really taught me how to make an engineering design function in the real world in a way that classes never could. For me this was one of the best ways to learn these hands-on lessons that I am still using today.

JB Straubel
Chief Technical Officer, Tesla Motors
Stanford Solar Car Project Alumnus



In 2005 SSCP raced its seventh car, Solstice, in the North American Solar Challenge (NASC), a 2500-mile endurance race from Austin, Texas to Calgary, Canada. At the end of the ten-day challenge Solstice took first place in the stock car division, clocking the fastest average time ever for a stock car in American solar racing history.

Equinox is the eighth vehicle the SSCP has produced, capable of reaching a top speed of 83 mph and over 200 miles on a single charge. An aerospace-grade solar array powered Equinox's digital electrical system, run by a nodal network of micro controllers. The team entered Equinox in the 2007 Panasonic World Solar Challenge.

Apogee, the team's ninth vehicle, was one of the most reliable and electrically advanced cars we have ever built. After successfully completing the 2009 Global Green Challenge in Australia, Apogee placed fourth in the 2010 American Solar Challenge.

2005 2007 2009 2011 2013

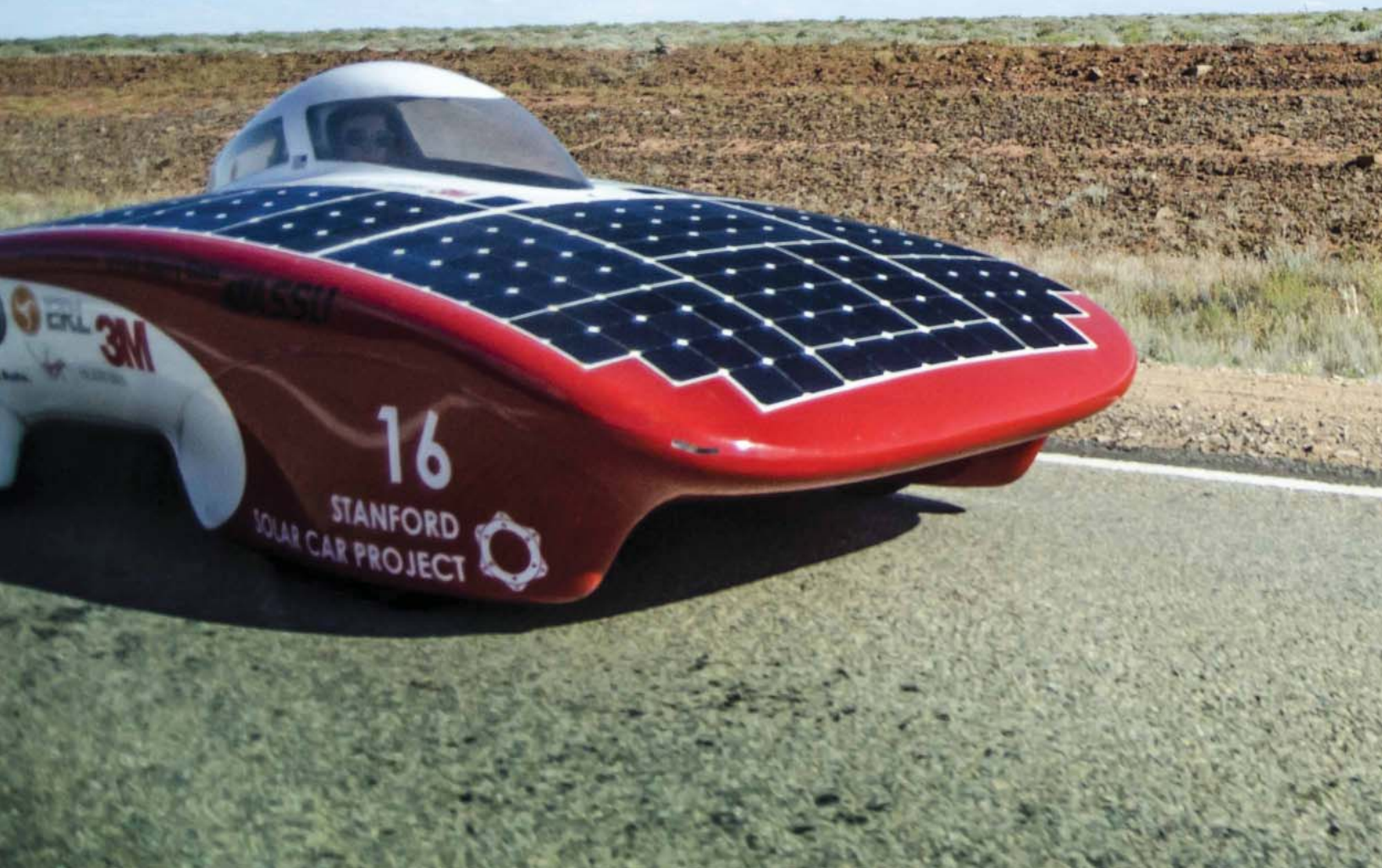
Xenith, our tenth vehicle, had one of the most efficient arrays compared with the other cars in the 2011 World Solar Challenge and finished 4th in the Production Class.

Luminos is the Stanford Solar Car Project's eleventh vehicle. As our fastest, most reliable solar car to date, Luminos competed in the 2013 World Solar Challenge and placed 4th overall and 1st out of all American teams, additionally marking it as our most successful vehicle in the team's 24 year history.

Luminos:

Luminos was the fastest and most successful car in the SSCP's 24 year history, placing 4th overall in the 2013 World Solar Challenge. Nearly two years of planning, design, fundraising, logistics, building, testing, and dedication have came together to produce what was the best characterized and most thoroughly tested vehicle in our project's history. We challenged ourselves to go back to the drawing board and build a car that was based on sound engineering theory and principles, beautifully straightforward in design and construction, and tested to be the most reliable and efficient vehicle in the history of our team.

The vehicle houses several major innovations under its smoothy understated exterior. For the first time in the history of SSCP, we have designed and constructed our own drive motors – one on each front wheel. These motors have a high 98% efficiency while allowing for a significantly superior mechanical design. Our array was once again designed and encapsulated by members of our own team. It uses monocrystalline silicon solar cells from Sunpower that have one of the highest production conversion efficiencies available in the world today, as well as a 3M-designed antireflective layer that also has excellent aerodynamic properties. The aerodynamic design of the car has achieved a lower tested drag value than many cars that competed under the old, less restrictive rules, and in fact closely rivals the optimum wind tunnel performance of our previous car, Xenith, while being significantly more robust to messy real-world conditions. Finally, our team's excellent skills in electrical and software design have produced our most efficient, durable, and reliable electrical system to date.



The Race: 2013

World Solar Challenge

The World Solar Challenge (WSC) is the ultimate challenge in sustainable energy. The challenge is to design and build a car capable of crossing the Australian Outback using only sunlight as fuel at the highest average speed. The event occurs every two years and attracts corporations, research, and educational institutions from all around the world.

Sponsorship Overview

The Stanford Solar Car Project is continually looking for new sponsors and industry partners. SSCP is a unique promotional opportunity, providing a fusion of both education and exposure opportunities to a prospective sponsor. The team actively promotes clean energy awareness and education, essential pursuits in striving towards a cleaner future. Furthermore, SSCP is a solar endurance racing organization of the highest caliber, and is widely respected as such by many teams, universities, and companies worldwide. It is rare that an endeavor can unite these aspects of education and achievement in one environmentally responsible mission, but SSCP does just that. The public and media recognize this, and SSCP's vehicle turns heads wherever it goes.

Furthermore, SSCP is educating the next generation of young, environmentally-minded engineers and business leaders about to enter the workforce. Former members take the skills they develop here and become assets at some of the most exciting projects underway today. In supporting the team, companies can begin to build their name and forge relationships with some of the future leaders of the technical world. Our sponsors receive numerous benefits:

- Recruiting Pool
- Opportunities for collaboration
- Invitations to attend some guest speaker and networking events at our lab
- Ability to feature our car in media publications
- R&D Test Platform
- National and International Exposure
- Contributions Tax Deductible

With a project of this size and of international proportions, SSCP is looking for significant support. This involves both monetary contributions and in-kind donations, covering everything from construction materials to airplane tickets

Media & Exposure

ABC News
Automobile Magazine
AutoWeek
California Solar Center
Chicago Sun-Times
CBS News
CNBC
CNET News
CNN Money
Cool Products Expo
Daily Post
Discovery Channel Planet Green
DP Technology
Dreammachines Expo
Energy Crossroads Conference
ESPN
EV World
Gizmodo
Green Wheels
International Consumer Electronics
Trade Show
Infineon Raceway
Knight Rider Tribune
Maker Faire
Miramar Events
Monterey Herald
MSNBC
NBC Nightly News
Oakland Tribune
Palo Alto Patch
Palo Alto Weekly
PBS
Popular Mechanics
Popular Science
Sally Ride Festival
San Francisco Auto Show
San Francisco Chronicle
SF Weekly
Smart Planet
Stanford Alumni Magazine
Stanford Daily
Stanford Magazine
Stanford News Service
Symbi International
The Daily Californian
The Examiner
Times Standard
US Department of Energy - Energy Efficiency & Renewable Energy
World Changing
...and over 30 other publications

Partnership Options

Platinum
$40,000+

- Very large logo on the solar car
- Car available for display at corporate events
- Logo on SSCP race uniform
- Logo on SSCP trailer and chase vehicles
- Paragraph-long company description on SSCP website
- Logo and hyperlink on SSCP website

Gold
$25,000-$39,999

- Large logo on the solar car
- Car available for display at corporate events
- Name on SSCP race uniform
- Logo on SSCP trailer
- Short description on SSCP website
- Logo and description on SSCP website

Silver
$15,000-$24,999

- Medium logo on the solar car
- Name on SSCP race uniform
- Logo on SSCP trailer
- Logo and description on SSCP blog

Bronze
$10,000-$14,999

- Small logo on the solar car
- Name on SSCP race uniform
- Logo on SSCP trailer
- Logo and hyperlink on SSCP blog

Teammates
$5,000-$9,999

- Small logo on the solar car
- Logo on SSCP trailer
- Logo and hyperlink on SSCP blog

Friends
$1,000-$4,999

- Small logo on the solar car
- Logo on SSCP trailer
- Logo and hyperlink on SSCP blog

About the 2014-2015 Cycle

Project Timeline

2014

MAY
- Complete aero body design
- Finalize MPPT design
- Finish tuning *Luminos*

AUGUST
- Finish chassis design
- Receive molds

SEPTEMBER
- Begin layups
- Finish Motor Controller
- Begin Solar Panel Encapsulation

DECEMBER
- Bottom Shell Completed

2015

APRIL
- Aero shell construction completed
- Panel Encapsulation Completed

MAY
- Wind tunnel testing
- Connect Solar Array

JUNE
- In-depth testing begins

SEPTEMBER
- Ship the car to Australia

OCTOBER
- Compete in the 2015 World Solar Challenge

One of SSCP's most valuable assets is its thorough understanding of photovoltaics and the rapid advances occurring in this area. To stay competitive in the solar racing world, SSCP team members constantly research and investigate the cutting edge of solar technology. The organization then brings this knowledge of the latest developments in academia and industry to the public.

2014-15 Projected Expenses for Our New Car

Electrical		
	New Solar Array	$190,000
	Battery Pack	$40,000
	Motor Development	$10,000
	Motor Controller Development	$6,000
	Electronic Components	$60,000
	PCB Production	$14,000
	Driver Interface	$10,000
Composites		
	Raw Materials for Metals	$3,000
	Molds for the Aero Shell	$100,000
	Raw Materials for Composites	$60,000
	Composite Panels	$15,000
Mechanical		
	Machining Costs	$40,000
	Roll Cage	$5,000
	Brakes and Shocks	$5,000
	Fasteners	$4,000
	Small Parts	$3,000
Operating Costs		
	Housing	$11,000
	Miscellaneous	$25,000
	Tooling	$3,000
	Design Software	$400,000
	Capital Equipment Repairs	$30,000
	Test Drive Trips	$20,000
2013 World Solar Challenge		
	Car Shipment	$80,000
	Race Supplies	$6,000
	Race Entry Fee	$10,000
	Support Vehicle Expenses	$35,000
	Publicity Materials	$1,000
	Lodging	$26,000
	Meals	$10,000
	Satellite Phone and Internet	$2,000
	Emergency Funds	$18,000
PROJECTED TOTAL:		$1.2 MILLION

PLATINUM SPONSORS

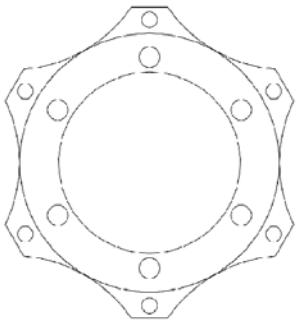
GOLD SPONSORS

Thank you to our long-time partners. The Stanford Solar Car Project could not have reached where it is today without you. We look forward to continuing to innovate, promote understanding of solar technology, and develop energy solutions for the future together. We genuinely appreciate all that you've done for us and all that you will do in the future.

As usual, we love to hear from you. If you have any questions or comments, or want to drop by our shop to check out our work or just to pay a friendly visit, don't hesitate to drop us a line. Or if there's something we can do for you, again, I encourage you to go ahead and let us know.

On behalf of everyone here, thank you!

Guillermo Gomez
Stanford Solar Car Project Team Leader



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