

University of Cambridge Unveiled Solar Car

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Cambridge University Eco Racing team's new solar racing car showcases cutting-edge environmentally-friendly technology, applicable to the next generation of electric vehicles.

A solar-powered [car](#) racing car that cruises at 60mph using the same power as a hairdryer created by students at Cambridge University was unveiled by the F1 star Jenson Button at the Goodwood Festival of Speed.

Previously codenamed "Bethany", but launched under its official name, "[Endeavour](#)", the car is being touted as Britain's brightest hope for the Global Green Challenge - a gruelling 3,000km race straight across the Australian Outback this autumn. It is one of Cambridge University's 2009 projects marking its 800th anniversary, and is student team Cambridge University Eco Racing (CUER)'s first ever entry into the

race.

Named after the famous ship with which Captain Cook sailed from England to Australia, the car's power comes entirely from [solar energy](#) captured by a 6m² covering of high-efficiency silicon cells. Underneath this solar "skin", however, the car is essentially an ultra-efficient electric vehicle, which designers say could provide a model for other forms of green transportation.

At the launch, Button, the current F1 World Championship leader, commented, "There's some very impressive technology in this racing car. It may be a world away from an F1 car in terms of power, but to get a car to drive at 60mph using two horsepower takes cutting-edge engineering."

Anthony Law, the team manager of CUER who discussed the car with Button Sunday afternoon in the Goodwood FOS-Tech Pavilion, said, "At a time when the automotive industry is being forced to look at a low-carbon future, our vehicle demonstrates the enormous potential of energy-efficient electric vehicle technologies."

"Transportation currently accounts for about 35% of the UK's energy use, so this is obviously an area in which we can have a big impact on climate change."

Using computer simulation software, the car's aerodynamics, rolling resistance, weight and electrical efficiency have all been optimised to minimise its energy requirements. It is also fitted with an energy-efficient hub motor, a control system to provide battery management and an electric braking system which generates energy.

It weighs just 170kg and its creators estimate that it requires up to fifty

times less power than a normal petrol-fuelled vehicle.

CUER has already designed the UK's first and only road-legal solar-powered car, which was driven from Land's End to John O'Groats last year. The new vehicle will be road-tested extensively in the coming months before being shipped to Australia for October's race from Darwin to Adelaide.

Its creators hope that the innovations in Endeavour's design will enable it to put in the best ever performance by a UK-manufactured vehicle, even though the team will be up against university and corporate teams that boast seven-figure budgets, dwarfing the students' own self-raised corporate funds of about £250,000.

Four student drivers will pilot the vehicle across the Outback, working in four-hour shifts to cope with the intense heat. During the race, however, the drivers will only have to steer the car and stay alert, as it is fitted with an advanced cruise control system which will automatically adjust its speed according to road conditions and weather forecasts.

Some seventy-five students from across the University have been involved in designing or building the vehicle, supported by a network of corporate sponsors, including HP and Cambridge Precision, academics and specialist advisors.

The initiative is also one of more than forty supported by the 2009 Fund, which has been set up to aid a wide range of University projects in honour of Cambridge's 800th anniversary.

Provided by University of Cambridge ([news](#) : [web](#))

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