

S'pore cars race in eco-marathon

Three student teams build eco-friendly vehicles for annual international event

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Jessica Cheam

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The NTU team with its solar-powered car that costs over \$60,000, in Germany. In the race yesterday, the vehicle produced more energy than it consumed and achieved an equivalent mileage of 806km per litre of fuel. -- PHOTO: WWW.RECKIMAGES.COM

SINGAPORE'S drive towards clean energy has spilled into the nation's education scene.

In total, 39 students from three institutes of higher learning worked for months to create vehicles using energy efficient technologies to race in the annual Shell Eco-marathon, which started yesterday.

Each of the three Singapore groups built an eco-friendly car - a record number for the event from the Republic.

The three vehicles, powered by hydrogen, solar and petrol respectively, were pitted against 199 other teams from 29 countries at the EuroSpeedway in Lausitz, eastern Germany.

At the end of the first day of the two-day race, the solar-powered car from Nanyang Technological University (NTU) team, which costs over \$60,000, fared the best after being blessed with sunshine.

It achieved an equivalent mileage of 806km per litre of fuel.

The 3.5m by 1.3m car, powered by a 5 sq m panel of polymorphous silicon cells, which convert sunlight into energy, even produced more energy than it used, to the delight of its 25-student team.

The vehicle is the result of more than five months of hard work by the students, although only eight of them made it to Germany, said the team's driver, Sean Tan, 21.

'It's our first effort and the first time we're racing in this competition, so we're really happy about the results,' he said.

The team's inspiration to use solar power came from Singapore's abundant sunshine, and it made sense to build a car that utilised this energy, said Associate Professor Ng Heong Wah from NTU's School of Mechanical and Aerospace Engineering, who supervised the team.

Also flying the Singapore flag was the team from ITE College West's automotive technology department, which entered a streamlined, lightweight vehicle running on an energy-efficient petrol engine built by four students for \$30,000.

Driver Amrit Singh Chail, 18, a second-year student, said their goal was to 'finish the race and gain experience', since it was their first time in the competition.

Nominated MP Eunice Olsen, who was at the Eco-marathon as Shell's FuelSave Ambassador promoting fuel-efficient driving, said that it was encouraging to see the growing number of youths interested in such eco-friendly activities.

'It really shows that our youth are becoming more environmentally aware and the interest is there to get involved,' she said.

'They will be the future generation driving Singapore's sustainable development.'

The annual European competition, now in its 25th year, involves cars completing seven or eight laps around a circuit of 22km to 25km within 51 or 53 minutes, depending on the category.

There are nine different categories, with prizes of up to 1,000 euro (S\$1,980) each. The winners are the cars that consume the least amount of fuel over the distance covered. The current record, set in 2005 by a hydrogen-powered vehicle built by Swiss team ETH Zurich, achieved 3,836km on the equivalent of a single litre of fuel.

Singapore's third team, from the National University of Singapore (NUS), will be aiming to achieve a rate of 45km on one litre of fuel when it races today.

The team almost did not make the race due to a blanket Influenza A (H1N1) flu travel ban by the university. This was lifted just before race day and the team yesterday scrambled to assemble its \$40,000 vehicle named Kruce, or Kent Ridge Urban Concept Eco-car.

The car is powered by a 1.2 kilowatt hydrogen fuel cell and emits water as an exhaust instead of greenhouse gases. Team leader Zhang Wei Sheng, 24, said they were 'disappointed' they could not reach Germany earlier to assemble the car, but he was confident that the team would do 'reasonably well'.

This is the third year that NUS is participating in the Eco-marathon. It came in 18th out of 58 last year in its category.

All three student teams are partly sponsored by Shell. Results of the Eco-marathon will be announced later today.