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04:04 PM 04 Feb	EOD	SENSEX	NIFTY	GOLD (MCX) (Rs/10g.)	USD/INR	LOGIN to Track your Investments	LIVE TV		
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SPOTLIGHT

Infrastructure Push



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Singapore's first 3-D-printed concept car developed

By PTI | 4 Feb, 2015, 03.44PM IST

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SINGAPORE: A team of students has developed Singapore's first urban solar electric car with an innovative 3D-printed body shell that has 150 parts.

Mounted on a carbon fibre single shell chassis, the Nanyang Technological University (NTU) Venture (NV) 8 will race in the Urban Concept category at this year's Shell Eco-marathon Asia.

Designed from scratch by NTU undergraduates and built over a year, these two eco-cars will aim to attain the highest fuel efficiency.

NTU students have also built the NTU Venture (NV) 9, a slick three-wheeled racer which can take sharp corners with little loss in speed due to its unique tilting ability inspired by motorcycle racing.

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NV9, featuring hand-made silicon solar cells, will be NTU's entry in the Prototype category at the Shell Eco-marathon Asia which will take place in Manila from 26 Feb to March 1.

Designed from scratch by NTU undergraduates and built over a year, these two eco-cars will aim to attain the highest fuel efficiency.

Associate Professor Ng Heong Wah, who mentored the two teams, said the students had taken a leap of faith and decided to go with disruptive innovations instead of making improvements over the previous versions.

"Using the latest engineering techniques learnt from their studies in NTU, the students have developed innovations such as silicon solar cells that can be contoured to follow the car's shape. This allows for maximum harvesting of the solar energy and a tilting mechanism in NV9 that can 'lean' in the direction of the turn to avoid losing speed," Ng said.

"We are extremely proud to have designed and assembled a 3D printed body shell for the electric car, which is Singapore's first and probably Asia's first 3D-printed concept car," said Ng.

"Despite being an Urban Concept car, it is no slouch and can reach a top speed of 60 kilometres per hour, while maintaining low energy consumption," Ilmi Bin Abdul Wahab, a year 4 computer engineering student who led the development of 3D-printed NV8, said.

The design "looks like a fusion between a F1 race car and a glider plane, with an all surround canopy for increased visual awareness," team manager of the three-wheeler NV9 team Winston Tan, a final-year electrical and electronic engineering student said.

The two NTU teams consist of 16 students from the various engineering schools. Over a year, they had built the cars at the Innovation Lab housed at the School of Mechanical and Aerospace engineering.

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