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Singapore's first electric taxi 'now road-ready'

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BY XUE JIANYUE - APRIL 25

SINGAPORE — The prospect of locally-designed electric-powered cabs plying roads here is a step closer to realisation, with talks started with automobile manufacturers on mass production of the technologies in the vehicle.

First unveiled as a prototype without engines, batteries and air-conditioning at the Tokyo Motor Show in 2013, EVA, Singapore's first electric taxi — designed and created by researchers from Nanyang Technological University and Germany's Technische Universitat Munchen (TUM) — is now road-ready.

Speaking at a press conference today (April 24), Professor Markus Lienkamp, scientific advisor director at the TUM-CREATE research centre, said talks are ongoing with industry players to bring their technological designs to mass market.

Touted as the first electric taxi suited for the tropics, EVA has seats designed to draw air and moisture away from passengers' bodies, and reducing the need for air-conditioning. Overhead air-conditioning outlets target upper bodies of passengers and drivers to reduce the need to cool the entire cabin, while a lightweight carbon fibre is used for the body as a fuel-saving feature.

Professor Lam Khin Yong, NTU's chief of staff and vice-president for research, who is one of the designers involved, said these features can be adopted by vehicles to reduce their carbon footprint. "Due to the hot and humid weather in the tropics, a significant amount of energy is consumed by the air-conditioning system in automobiles," he said.

The more than 28,000 taxis here make up less than 3 per cent of Singapore's vehicle population but account for 15 per cent of the total distance covered by all vehicles here, studies done by researchers behind EVA show.

Two barriers to mass-adoption of electric taxis are their high cost and insufficient fast-charging stations, said electric vehicle researchers.

Prof Lienkamp said mass production would push the prices of electric cars down, making it more attractive for widespread adoption "because there is no reason to buy the then-more expensive combustion engine".

Although there are more than 70 charging stations in Singapore, Prof Lienkamp said only "three to four" are fast-charging, which allows the taxi to charge enough power in 15 minutes to run 200km.

Singapore's size makes it viable to build more such stations, said Professor Thomas Hofmann, TUM vice-president for research and innovation.

"The size of the country, it is quite small. It would make sense to build up a dense network of these charging stations. If you go to the United States, for example, it is much more complicated," he said.

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