Singapore in drive to build electric car

By Amresh Gunasingham

A LOCALLY made electric car will be ready next year. It will be designed and developed at a new research facility set up by the Nanyang Technological University (NTU) in collaboration with the Technical University of Munich (TUM).

The prototype will undergo extensive remodelling to suit local weather conditions after input is received from prospective users here. A second prototype will be developed two years later, and the car is expected to ply roads here in 2018.

NTU yesterday also inked eight deals with industry players such as ST Kinetics, Bosch, Siemens and IBM to ramp up its expertise in the field. It then hopes to engage automotive manufacturers to bring the cars to the market.

The first prototype will be unveiled at an auto show in Frankfurt, Germany, next year.

The move comes a week after the Government announced it will set up more charging stations over the next two years to encourage more electric cars on the road.

The TUM-CREATE centre for Electromobility, which will house about 150 researchers, will focus on developing electric cars that suit the tropical, more humid weather in Singapore.

In contrast to the hybrid vehicles now available, electric cars will be powered entirely by batteries, providing a cleaner alternative.

Researchers at NTU will also participate in an electric vehicle trial to be conducted jointly by the Land Transport Authority and Energy Market Authority (EMA) next year.

From this, they hope to glean information on the profile of drivers here, such as the size of cars they desire, and to what extent the vehicles need to be equipped with air-conditioning, said Professor Subodh Mhaisalkar, executive director of the Energy Research Institute@NTU.

Drivers in Europe generally prefer smaller cars and do not need air-conditioning due to the temperate weather there, he added. This influences the type of batteries that need to be developed to power such vehicles.

“With the 50 electric cars being tested (in the EMA’s trial), we will have sufficient data on what the Singapore driver expects from his electric car. This kind of data is presently available only in Europe,” said NTU president Su Guangxu.

Drive-by-wire technologies use electronic controls and systems to improve engine efficiency while reducing vehicle emissions.

Speaking at the opening of the research facility yesterday, Dr Tony Tan, chairman of the National Research Foundation, noted the need to wean energy demand here away from traditional fuel-based sources, and tap clean energy.

“The knowledge and capabilities developed in electric vehicles (EVs)... would provide critical insights into issues such as what would work in EVs and what could become business opportunities,” he said.

The move to develop an electric car here comes after the Government announced increased funding for research and development - $16.1 billion for the next five years, up 20 per cent from the previous five years.'