

MEDIA RELEASE

NEWS FROM THE UNIVERSITY OF TASMANIA

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ATTENTION: Chiefs of Staff, News Directors



Travel 1000km on 17 litres – hybrid scooter unveiled at University

In what is understood to be an Australian first, the School of Engineering at the University of Tasmania has developed a pilot hybrid electric scooter which runs both on state-of-the-art battery technology and an ethanol-blend driven internal combustion engine.

The scooter has been developed by a strong research team in Automotive Technology and Electrical Engineering as part of their push to build capabilities in Australia in alternative energy.

Steven Ambrose, a research scholar within the Engineering School who helped build the scooter, said its features included:

- a state-of-the-art regenerative braking system which charges the batteries as the brake is applied;
- advanced control systems which start the ethanol-blend engine to assist during acceleration and steep climbs;
- an ability to reach a top speed of 80kph when both energy sources work together;
- a recharge time of 40 mins when all recharge systems – including plug in - are combined;
- costs about \$1500 for all the add-on modules for an existing scooter;
- on hybrid mode, the scooter uses only 1.7 litres of ethanol blend per 100km – 35 per cent less fuel than a petrol-only scooter.

Chief investigator, Dr Vishy Karri, said that while hybrid technology was well advanced in the US, Europe and Japan, the fact Australia was now developing its own expertise was “very satisfying”.

“The pilot program has reinforced our capability in building yet another solution to alternative fuels,” he said.

“We need several, parallel efforts to build alternative energy sources. Hydrogen technologies, biodiesel as an alternative fuel and now the plug-in hybrids are our efforts to reduce our dependency on petrol in the future. I am extremely proud of our technical team, their capabilities and their enthusiasm for new challenges.”

Mr Ambrose said it had been a significant challenge to build “a technology capability on par with the Germans, Americans and the Japanese”.

“It has been a tedious journey to synchronise all the control systems and I am glad it is working well.”

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*** Background information below***

The scooter pilot program:

- Is among a series of pilot programs to be carried out at the University to establish electric hybrids coupled with engines as alternative energy for automobiles in Australia.
- Is a first-generation prototype for two wheelers, demonstrating advanced control systems to optimise battery power and reduce petrol use in two wheelers by 35 per cent.

- Showcases Tasmania's expertise in building hybrid vehicles from first principles. We can now join, in terms of expertise, with Americans, Germans and Japanese in this technology.
- Is part of a process to advance our expertise in this area and reduce the cost of production of these vehicles for eventual public use.
- Helps establish Tasmania as a centre for alternative energy research because of the availability of renewable energy (Hydro) and expertise.