

Renewable Energy Vehicle (REV) Project

What is the REV project about?

Renewable Energy Vehicle (REV) re-started in 2008 and plans to develop two electric vehicles, based on an economy car and a performance car. REV wants to demonstrate what is possible with today's technology and will also conduct research into future electric vehicle technology.

Why use electric vehicles?

Global warming demands us to reduce CO₂ emissions. Oil and petrol prices are at an all-time-high. With electric vehicles, we can achieve sustainable, truly zero-emission transportation.

Aren't we just shifting the problem to power plants when recharging the car?

No, we are not. We will have a 2kW photovoltaic system installed on the roof of the EECE building and we will monitor our energy balance over the Internet. The solar panels will produce more clean energy than we need for recharging the cars on a daily basis. Even the energy for manufacturing the solar panels will be offset by the solar energy generated within 1.5 years. Current solar panels have a 25 year life time and future solar panels will even be more efficient.

What does it cost to convert a car to electric drive?

Currently around AU\$15,000 in parts (minus profits from selling the petrol engine), of which about half is for the batteries alone. However, with batteries being mass-produced in the future, this price will come down considerably, which will make it economical on a large scale.

How much does it cost to recharge an electric car and how long can it drive?

About AU\$1.80 for a full charge from the grid for a range of 75-100km (or about \$1.40 when considering the purchase of solar panels over 20 years, without interest). The same car would need 6.5 litres of petrol for this distance at about AU\$10 today.

Is this a research project?

The conversion of the economy car (Getz) is a student engineering project with little research contents – after all, electric cars have been around for 100 years and we see them in our daily lives as wheel chairs, golf carts and even mail cars on campus. However, our second electric car project is a performance car (Lotus Elise), which will have significant research contents, which will include motor control, drive-by-wire, and driver-assistance systems.

Can I drive it?

Yes, you can. After completion of the economy car, we will make it available for test drive to staff, students and even the general public. With this we will generate driver evaluation data for our research and at the same time increase awareness of zero-emission vehicles and clean energy.

Who do I contact?



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