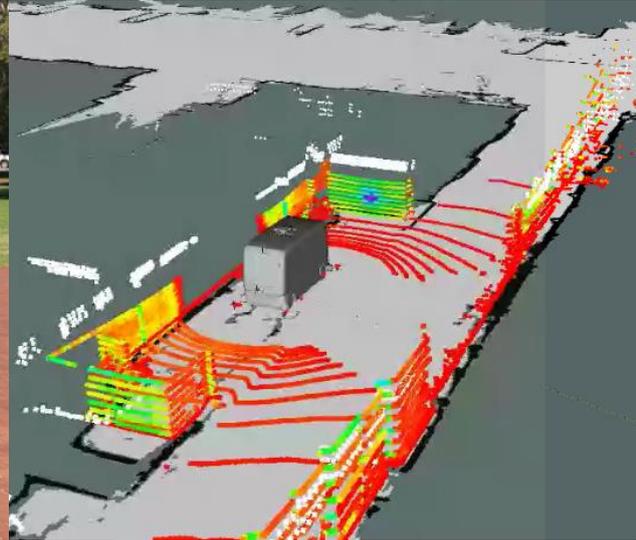


# The Renewable Energy Vehicle Project (REV)



THE UNIVERSITY OF  
**WESTERN  
AUSTRALIA**

School of Engineering



**The Renewable Energy Vehicle Project (REV)** is an initiative formed by The University of Western Australia to design and develop environmentally sustainable technologies for future transportation. In times of rising fuel prices, growing air pollution and global warming, finding ways for sustainable, environmentally friendly transportation is a fundamental goal.

REV started in 2008 with the development of a road-licensed fully electric commuter car based on a Hyundai Getz and followed up with an electric sports car based on a Lotus Elise. Two Formula SAE-electric race cars were built in subsequent years. The REV electric cars cost as little as \$2/100km to run, while the petrol costs of comparable cars approach \$20/100km.

REV participates in Perth's major sustainability events: Perth Motor Show, ResourCity, Greenhouse, Sustainable Living Expo, Elektrikhana, Perth Sun Fair and UWA Expo, as well as a number of related motoring and sustainability events. REV vehicles are being displayed around various Perth schools to develop an awareness program to educate primary and secondary school students about sustainability.

REV together with CO2 Smart, EV Works and eleven partner organizations from WA government and industry conducted the Western Australian Electric Vehicle Trial with eleven converted Ford Focus, which constituted the first EV Trial in Australia.

Within an Australian Research Council (ARC) linkage project, funded by government and industry, REV established Australia's first Level-2 charging network with 23 AC charging outlets in the Perth metropolitan region.

This charging network is available to the general public and usage data is collected and analysed for research purposes.

All REV cars incorporate cutting-edge electromobility technology and IT components developed at UWA, including battery-management systems, regenerative braking, advanced driver information systems, data-logging black boxes and evaluation systems.

REV has also built electric watercraft, including an electric jet-ski and an automatically stabilized electric hydrofoil.

REV further specializes in autonomous vehicles / driverless cars with research vehicles including a BMW X5, an electric FormulaSAE race car and two electric shuttle buses.

Emission-free power generation for charging EVs is an important part of the REV strategy.

## Team

The REV project is the co-operative effort of a team consisting of:

- Over twenty students at the graduate and final year project level from all Engineering disciplines, including Automation & Robotics, Mechanical, Electrical and Software Engineering.
- Academic staff with industry experience supervise, moderate and assess student work.
- UWA technical support staff and volunteers support students in project development and installations, offering assistance and advice on practical components of the project.

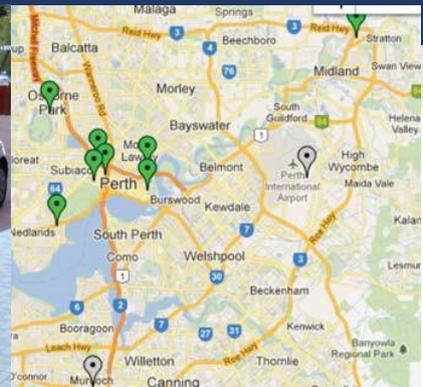




## Media

A key component of REV is raising public awareness of the need for sustainable transportation; therefore, the project aims to maintain a significant media exposure over the coming years. Since 2008, REV has had over 20 TV reports, 40 radio interviews and over 150 print articles. REV entertains a significant web presence highlighting research results, vehicle specifications, upcoming events and sponsor involvement with around one million page hits per year:

[REVproject.com](http://REVproject.com)



## Funding

REV is funded primarily through industry and personal sponsorships.

Sponsors are funding the ongoing maintenance and expansion of the REV charging station network, as well as research on electric cars, electric watercraft, and autonomous vehicles. Our projects are aimed at electric drive systems, autonomous navigation, education in automation for undergraduate and postgraduate students, charging infrastructure development and community outreach.

There are a number of ways your organisation can support the REV project: Through a one-off sponsorship amount, by funding a new charging station with community benefit, or through annual advertising on our existing EV charging network.

Help us to support the vital goal of a sustainable future!

## REV Sponsorship

<https://REVproject.com/sponsorship/>

### PLATINUM Sponsors (AUD \$50'000+)

- Large logo on the REV cars, posters, newsletters, pamphlets, website
- Presentation of REV vehicles at company events
- Exclusive access to REV vehicles
- Guided tour and presentation by the REV team

### BRONZE Sponsors (AUD \$5'000+)

- Small logo on posters, newsletters, pamphlets, website

### GOLD Sponsors (AUD \$25'000+)

- Medium logo on the REV cars, posters, newsletter, pamphlets, website
- Presentation and display of REV vehicles at company events
- Guided tour and presentation by REV team

### SILVER Sponsors (AUD \$10'000+)

- Small logo on the REV cars, posters, newsletters, pamphlets, website
- Guided tour and presentation by the REV team

## REV Vehicle Specifications

REV Spec Sheet	REV Eco	REV Racer	EV Works Focus
Base car	2008 Hyundai Getz	2002 Lotus Elise S2	2011 Ford Focus Sedan
Seats/doors	5 seats / 5 doors	2 seats / 2 doors	5 seats / 4 doors
Original engine	1.4l, 4 cylinders, 70kW	1.8l, 4 cylinders, 116kW	2.0L 4-cyl. engine
Electric motor	Advanced DC FB-4001, DC	UQM Powerphase75, AC	Netgain Impulse 9
Controller	Curtis 1231C, 500A	UQM DD45-400L, 400A	EVnetics Soliton1, 1000A
Power, Torque	28kW, 136Nm	75kW, 240Nm	80kW, 53Nm
Regenerative braking	No	Yes	No
Instrumentation	EyeBot M6	Automotive PC	None
Batteries	Li-Ion-Phos., 45 x 90Ah	Li-Ion-Phos., 83 x 60Ah	Li-Ion-Phos., 45 x 160Ah
Battery weight	135kg	191kg	247.5kg
Voltage	144V	266V	144V
Total capacity	13kWh	16kWh	23kWh
Total weight (orig.)	1,160kg (1,160kg)	936kg (780kg)	1,330 kg (1,330 kg)
Top speed	125km/h	200km/h (estimate)	130km/h
Range	80km road-tested	100km road-tested	131km road tested
Charging Time	6h (full charge)	6h (full charge)	3h (fast), 10h (slow)

## Contact

Professor Thomas Bräunl  
The University of Western Australia  
M018, 35 Stirling Highway, Perth. WA 6009

CRICOS Provider Code: 001266



Stockland

wevolt

