

All electric – all South African



Electric Joule generates jobs

America, Europe and Japan may dominate the carbon intensive automotive industry, but South Africa is leading the way in the development of an all-electric commercial vehicle.

The Joule is a five-seater battery-powered urban hatchback. Developed by tech start-up Optimal Energy, it is also the first car of any kind to be entirely designed and built in South Africa. Debuting at the Paris motor

show in October 2008, it was praised not only for its environmentally friendly engineering but also for its elegance.

Part of its appeal lies in two large-cell lithium ion battery packs, which will take it from zero to 50km/h in a zippy 4.8 seconds. They deliver a top speed of 135km/h and a range of 400km, with zero carbon emissions at point of use. The car can be charged using a normal 220-volt home outlet, with each 200km battery pack taking approximately seven hours to charge.

For those worried about running out of juice, says Sales and Marketing Director Diana Blake, the Joule will have a diagnostics system tracking how much energy remains – and how far that will get the car. Pre-charged batteries will be available from service centres. The company is also planning 24/7 roadside assistance in the urban centres of Gauteng, Cape Town and Durban.

So what about the price? The Joule is forecast to cost around R190,000 (\$24,000) – but should save up to 90% on fuel expenses, compared to a petrol or diesel car in the same price category. With a 50-litre tank of petrol currently costing close to R400 (\$50), that would be a massive saving. Maintenance and servicing should also be half the price of conventional cars, thanks to a simpler design and fewer parts.

With electric cars experiencing a huge degree of interest worldwide, work on Joule is forging ahead. A few hundred models are set to be showing off on South African roads in time for the 2010 World Cup. Optimal Energy intends to expand production to 15,000 models on the showroom floor by 2012, and then leap to manufacturing 50,000 the following year.

It hasn't all been a smooth cruise, though. CEO Kobus Meiring says that, when the idea of an electric car dawned on him in 2004, development funding was hard to come by. But he persisted, and eventually managed to garner R70 million (\$9.3 million) from the Department of Science and Technology's Innovation Fund and the Industrial Development Corporation.

Optimal Energy's main aim, says Brand Manager Myles Hoppe, is to move the country's automotive industry away from being third-party manufacturers of global brands, to producing a truly South African high-end product. In the process, he says, it should create about 6,000 direct and indirect jobs. – *Yugendree Naidoo*