

Israel gears up to go electric

February 14 2011, by Gavin Rabinowitz



The model of an electric car is displayed at the facilities of Better Place, a electric vehicle services provider, in Gilot north of Tel Aviv, in January 2011. These heralds of a new age are remarkably quiet. No drums, no trumpets, just the whirr of a robot changing batteries and an electric car silently gliding around the Better Place test track.

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These are the final touches as Israeli-American entrepreneur Shai Agassi prepares to deploy a fleet of electric cars later this year, hoping to break Israel's dependence on oil by the end of the decade.

But as Agassi's venture gathers momentum, with similar projects getting under way in Australia, Canada, Denmark and Hawaii, there are a few issues casting a shadow over his vision of making the world a better

place.

Rivals and experts have expressed doubts over the technical aspects, particularly the ability of Israel's electric grid to handle a sudden increase in demand from electric cars.

Of greater concern is that French automaker Renault, Agassi's main partner and vehicle supplier, is embroiled in a messy industrial espionage scandal surrounding its flagship electric car programme.

Still, Agassi -- a hi-tech multi-millionaire and former number-two at German software group SAP -- remains optimistic, both about the success of his project and the inevitability of its global impact.

"We did not decide to change the world, we decided to do something that will make the world a better place," Agassi told AFP at the Better Place visitor's centre near Tel Aviv.

His idea is simple: to get an entire country to give up its dependence on oil.

"The only approach that gets us off dependence on oil in a way that is scalable, to run the country and the world, will be an electric car," he said.

To do this, he needed to overcome a problem that has kept electric cars a rare sight for over a century -- short [battery life](#) and long recharging times which has made them impractical for most drivers.

Agassi's solution was to combine a vast country-wide network of convenient recharge points, with the ability to switch to a full battery in less time than it takes to fill up a regular car with petrol (gasoline).

"We have to get a car to be more convenient and more affordable for the market to adopt it," said Agassi.

At the centre they demonstrate the battery switch technology. The car rolls onto two rails, like a car wash, and a robot slides underneath where it removes the depleted 200 kilogramme (320 pound) battery and replaces it with a charged one in less than a minute.

The precision technology is taken from Israel's air force, which uses the same mechanism to load and release bombs from F-16 fighter jets, explains the guide.

At the nearby test track, visitors are trying out the cars.

The vehicles respond immediately to pressure on the accelerator and the ride is smoother as electric engines don't have gears.



An Israeli man stops an electric car next to a charging station at the first electric vehicle demonstration centre in Ramat Hasharon near Tel Aviv on February 7. These heralds of a new age are remarkably quiet. No drums, no trumpets, just the whirr of a robot changing batteries and an electric car silently gliding around the Better Place test track.

But the most startling aspect is the silence. Inside the car, the only sound is the hum of the air conditioner; outside, it is just the sound of tyres on tarmac.

"The driving is very pleasant and calm ... it's simply an experience," said Haim Lotem, a local resident who has come to see what all the fuss is about.

Agassi says the first of the 100,000 Renault Fluence ZE (Zero Emission) family sedans will hit the road before the end of the year.

Some 10,000 of the 50,000 visitors to the centre have already signed up and Better Place has inked agreements with 150 corporate fleets to offer the Fluence to their employees.

"We are looking for 5,000 cars in the first year to see that the system works, then 20,000 in the second year," Agassi said.

He expects a massive jump in 2015 as the system proves itself to be efficient and cheaper than petrol, and as the technology is embraced by the public.

"Three years after, about half of the kilometres (driven) in Israel will be electric cars," he confidently predicted.

But others don't buy into his rosy outlook.

Marc Coroler, a senior vice president at Schneider Electric, told the Haaretz newspaper that Israel's state-run electricity grid would not be able to handle the influx of electric cars that use as much power as a household.

And in Israel, a geographically small nation with 2.5 million motor

vehicles on the road, experts say the environmental benefits will be much smaller than Agassi projects.

"The effect of electric cars means an increase in demand for electricity," said Paul Rivlin, a senior researcher at Tel Aviv University's Dayan Centre, specialising in oil and economics.

"In order to provide the electricity you need to manufacture it. In Israel we use oil, gas and even coal," he said.



US-Israeli Shai Agassi, 43, founder and chief executive officer of Better Place, an electric vehicle services provider, speaks during an interview with AFP in Gilot north of Tel Aviv, in January 2011. These heralds of a new age are remarkably quiet. No drums, no trumpets, just the whirr of a robot changing batteries and an electric car silently gliding around the Better Place test track.

Agassi says he'll overcome grid limitations by linking all two million [electric cars](#) together with software that will oversee and manage the recharging "without the addition of a single generator or transmission line."

And besides, most people will recharge their cars overnight when

demand is low, he says.

He acknowledges that while the pollution savings in Israel will be limited, they will improve as Israel moves away from coal.

He is also trying to source renewable energy and the end result will still be "significantly better than anything you do with a gasoline or diesel car.

"Obviously if you go to places like France you go directly to zero (emissions), with nuclear and hydro making up 95 percent of the electric grid," he said.

Agassi refuses to comment directly on the industrial espionage scandal at Renault, which has sacked three top managers in its four billion euro (\$5.5 billion) electric car programme and begun legal action.

But he says it won't affect his goals. "I don't see a single reason to believe today that Renault will miss the dates or the quality of the car."

And even sceptics like Rivlin agree that he can make the world a "better Place" if a successful launch in Israel can be a model for other nations.

"If Israel can do it successfully then it will be of interest to other people and will spur on the United States and China -- that is where it should be very important," said Rivlin.

"These demonstration effects are very powerful in the global economic system."

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