

# Reimagining the Automobile Industry by Selling the Electricity



Peter DaSilva for The New York Times

Shai Agassi, a Silicon Valley technologist.

By [JOHN MARKOFF](#)

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SAN FRANCISCO, Oct. 28 — Shai Agassi, a Silicon Valley technologist who was in competition to become chief executive of [SAP](#), one of the world's largest software companies, has re-emerged with a grand plan to reinvent the world's automobile industry around battery-powered all-electric cars.

Others are developing green cars, like the Tesla and Chevrolet Volt. However, Mr. Agassi is not planning to make cars, but instead wants to deploy an infrastructure of battery-charging stations in the United States, Europe and the developing world.

The new system will sell electric fuel on a subscription basis and will subsidize vehicle costs through leases and credits.

“We’re basically saying this is just like the cellular phone model,” he said. “If you think of Tesla as the [iPhone](#), we’re AT&T.”

On Monday, he plans to announce in New York City that he has raised \$200 million from private venture partners, including the Israel Corporation, a large Israeli transportation and technology holding company, Vantage Point Venture Partners, as well as a group of private investors including Edgar Bronfman Sr., the liquor magnate, and [James D. Wolfensohn](#), former head of the [World Bank](#). Israel Corporation's \$100 million investment was announced earlier this year.

In an interview Thursday, Mr. Agassi said tests of prototype vehicles would start in early 2008 and the company would begin commercial sales and service in two years. He said he was working to obtain commitments from both governments and carmakers.

Mr. Agassi founded TopTier software in Israel in 1992 and then moved the company to California. TopTier was acquired by SAP, based in Germany, in 2001.

He said his approach was a radical departure from other electric-car ventures that relied on advances in battery technology, which have come slowly.

Instead, he plans to extend the existing electric-power grids with a wide network of intelligent recharging stations in urban areas and supplementing it with a smaller number of automated battery-replacement stations.

Today, giant automobile makers as well as start-ups like Silicon Valley's Tesla Motors are struggling with life cycle, performance and the cost limitations of battery technology. Tesla, for example, has been delayed several times by battery-related issues and now says it plans to deliver its first models next year.

[General Motors](#) has said it hopes to have advanced lithium-ion battery technology in place to commercialize its planned Chevrolet Volt, but those batteries are still being developed.

There are also issues of safety with existing lithium-ion batteries that have become unstable under extreme temperatures.

"If you listen to the car companies, they suggest there is a fix, but it's not there yet," said Stephen J. Girsky, a partner at the investment firm Centerbridge Partners who formerly served as an adviser to General Motors.

However, the new venture, which Mr. Agassi has named, for now, Better Place, would be viable even with existing lithium-ion battery technology, he said.

The economics will be more compelling in Europe, where gasoline is roughly twice as expensive as in the United States, he said. Assuming a life span of 1,500 battery recharges, he said that the energy cost of all-electric cars would be about 7 cents a mile. That would be less than a third of the cost of driving a gasoline-powered car today.

“It’s much easier to transport electrons than octane molecules,” he said. “We’ve already got a grid that goes around the entire world; all we have to do is extend it.”

Mr. Agassi envisions tens of thousands of recharging spots that will adjust for both cost and use patterns. For example, a group of parking-lot chargers at a workplace might recharge a visitor’s car before a regular employee’s car parked for the entire day.

The system will also supplement recharging stations that require about one minute of recharge time for every minute of driving, with a smaller number of car-wash-style stations for swapping batteries. This would make it possible for a driver to go to a station rather than wait to recharge a battery, he said.

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