

Big Blue dreams of a big green battery

28 August 2009, by Ian Sherr



A view of the Tesla Model S all-electric sedan in March 2009. After watching a Tesla electric sports car rocket from zero to 60 mph (100 kph) in less than four seconds, Spike Narayan, a researcher for IBM has been working on Lithium-Air batteries, which the company said has the potential to pack up to 10 times the power stored in Lithium-Ion batteries commonly found in cell phones and laptops.

Spike Narayan watched a Tesla electric sports car rocket from zero to 60 mph (100 kph) in less than four seconds and knew batteries would be the next big thing.

"It's hard to understand you're not in a gas powered Porsche," Narayan said as he recalled the demonstration outside IBM's Almaden Research Center in the heart of [Silicon Valley](#).

"Your head snaps back from the speed."

The vision underscored the importance of [battery power](#) to Narayan and other IBM researchers who led a future-of-batteries conference that ended Thursday at the center.

Scientists spent two days discussing potential new ways to store electricity and chart paths for research.

IBM is focusing on Lithium-Air batteries, which the company said has the potential to pack up to 10

times the power stored in Lithium-Ion batteries commonly found in cell phones and laptops.

The US technology giant and its partners expect to invest approximately 10 million dollars in the project during the next three years.

Narayan said that the time is right to strive for battery breakthroughs.

A Chevrolet Volt car poised for release in the United States has batteries that can power it for 40 miles (64 kilometers) without help from a gas engine built into the vehicle.

Toyota will soon launch a third-generation of the Japanese auto titan's popular hybrid gas-electric Prius, sporting even more [energy efficiency](#).

[Tesla Motors](#) just recently received a 465 million dollar loan from the US Department of Energy to build an electric family sedan to accompany the Roadster sports car that is the young US company's sole offering.

IBM believes Lithium-Air could be the next big thing when it comes to providing batteries for those and other such innovations.

Big Blue's big green project has skeptics, some of whom debate whether consumers will be interested in energy efficient cars.

"Consumers are not willing to pay for fuel-efficient technology if they don't know the future of fuel prices, or even their own job," said Daniel Sperling, who co-authored the book 'Two Billion Cars' about the challenges of fuel efficiency.

While some electric car backers are encouraged by the success of a US "Cash for Clunkers" program which subsidized purchases of fuel-efficient cars by those trading in gas guzzlers, Sperling believes that more needs to be done.

"Consumer behavior is a big part of this," he said.

"We need to do our best to align market forces to encourage them." (c) 2009 AFP

Some conference attendees claimed that a lack of guidelines at the US Environmental Protection Agency was leaving car makers free to promise mileage performance that vehicles aren't likely to deliver on.

Nissan announced its coming Leaf car will get 367 miles (590 kilometers) per gallon of gasoline, while Chevrolet says the Volt will squeeze 230 miles (370 kilometers) from each gallon of fuel.

"I would have never announced those numbers," Nobel Prize winner Burton Richter said of General Motors, which owns Chevrolet. "It was a stupid thing to do."

Richter and other conference-goers suspected that the performance by the cars may not be as spectacular as the companies claim, which could sour the consumers' tastes for alternative energy technologies.

Since hydrogen fuel cells aren't yet practical, Richter said, battery power is the best alternative to oil.

"The stars are aligned between national security freaks and climate change freaks," the Stanford University professor said of increased interest in oil independence.

"The world is eager for this stuff."

For conference speaker Ted Miller of Ford Motor Company's research division, better batteries go far beyond cars to better performing devices such as smaller iPods and longer lasting laptops.

"But these things take time," Miller said.

In the mean time, Miller was just glad to see progress.

"It's delightful to see 100 miles (161 kilometers) per gallon," he said with a smile. "It's a phenomenal feeling."

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