

Tesla Plugs In to PG&E Research

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Tesla Motors is teaming up with Pacific Gas & Electric to research ways to remotely regulate when and how the startup's electric sports cars charge up from the grid, the California utility said Wednesday.

The two-seat Roadster, due out this year, has certainly raised the profile of all-electric cars to transform what was once the terrain of smug savers of the Earth to something now remotely sexy.

Some mainstream environmental organizations have thrown their weight behind plug-in electric cars—of all shapes and sizes, not just hotrods—as an answer to America's driving addiction rather than biofuels, which critics say are less environmentally desirable and require a lot of vegetation and energy to produce and transport.

But plugging electric vehicles into the grid to charge up or feed back electricity is a lot more complicated than it sounds. Utilities such as PG&E know they must eventually figure out how to do it without frying the system, causing blackouts, or worse.

"For it to actually be implemented there would have to be a very sophisticated communications system in place," PG&E representative Jennifer Zerwer said. Developing a way for vehicles to "communicate" with the grid "presents the opportunity to turn each vehicle into a remotely controlled electricity storage system," she said.

PG&E's ideal would be to charge the cars at night when hydro, wind, and nuclear power are more prevalent in the energy mix than natural gas-generated power and to have the cars feed back power to the grid during the day at peak hours, Ms. Zerwer said.

The current project, slated to get underway in the fourth quarter, focuses on controlling when the cars would suck power from the grid so that they aren't all powering up at once or at peak hours, presumably. PG&E would not disclose how much money they will commit to the project.

Although the company demonstrated that it could plug in a converted Toyota Prius last spring, it has only recently started working with makers of all-electric vehicles. PG&E had worked previously with Tesla on the installation of the Roadster's charging station at homes and businesses, according to Ms. Zerwer.

The company also plans to research vehicle-to-grid connections with Ontario, California-based Phoenix Motorcars' all-electric SUV, scheduled to be on the road next year, she said.