

Smart Cars Can't Talk to Smart Grids, and That's Dumb

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Cars are moving from gas to electric power, and the electric industry is moving to smart grids, which provide manageability and control, as well as two-way feedback. How will smart energy meters and intelligent power distribution affect plug-in electric cars? That was the subject of a panel here at the Green:Net conference in San Francisco, featuring a number of companies working on the massive infrastructure programs that may transform the auto industry as we know it.

"The car is essentially a server on wheels," points out panel moderator Felix Kramer. The founder of The California Cars Initiative, Felix did the first electric car conversion in 2004, and in '06 became the world's first non-technical PHEV consumer owner. A server on wheels? It's easy to grasp the concept of plugging in a car, but harder to comprehend that a car can give anything back, much less help feed the grid rather than drain it. But that's half the point, it seems.

John Clark, in charge of electric vehicle management for GridPoint, helps make software for managing distributed resources, like EVs. Conversion kits in today's vehicles allow his company to interact with a car's charge/discharge system, taking a simple plug and "smartening" it, making cars intelligent, controllable things.

Richard Lowenthal, CEO of Coulomb Technologies, has a similar plan. His company makes the Californian charging stations that power the Better Place network there. "By networking cars, you can pay for fueling your car, as well as smart grid integration, high-availability, and emails that your car has been charged," he notes.

Coloumb Tech just announced distribution in Europe of the ChargePoint Network, a smart networked charging infrastructure for plug-in vehicles.

In the heat of the battle is, unsurprisingly, Google. The company has leveraged its GFleet of employee rideshare vehicles to study people's driving habits in EVs, and the recent announcement of green grid technology makes its goals fairly clear. Rolf Schreiber RechargeIT Engineer, worried about interoperability among the various systems, a sentiment echoed by most panelists. The industry needs standards for communication between smart vehicles and the grid; with multiple smart infrastructures, interaction among them is a challenge.

"What we want is cold beers and hot showers," not complex systems and challenging tasks, joked Sven Thesen, in charge of utility operations & sustainability strategy for Better Place.

Standards work is tedious and boring, after all. Coloumb's Lowenthal agrees, noting that his company already does interutility roaming. "We make it so you don't need a relationship with each of them at present," he points out. "But that's just the start."

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