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Hybrids Tap Grid

BY SALVATORE SALAMONE

TAKE A SUCCESSFUL SOFTWARE EXECUTIVE with a proven track record and lots of venture capital money behind him, combine that with a new twist on hybrid cars and you have Project Better Place, a company whose goal is to install and operate an Electric Recharge Grid consisting of charging spots and battery exchange stations in countries around the world.

Shai Agassi, a former SAP executive backed by $200 million, launched Project Better Place in October with lofty goals. "We need to rethink how to bring together consumers, existing technology, and the entire car eco-system to establish the next generation infrastructure that provides energy for commuters and is not dependent on liquid fuels," said Agassi.

Borrowing a business model from cellular service providers, Project Better Place would own a plug-in hybrid electric vehicle's battery – and in some cases the entire car – and charge people a monthly fee to recharge it. To accomplish this, the company would set up stations where attendees would pull out and replace the spent batteries in about the time required to fill a regular car's tank with gasoline.

This model, if it proves successful, could significantly increase the number of plug-in hybrids on the road. And that in turn will have great ramifications both good and bad for electric utility companies. For example, if drivers charged their cars overnight in their own garages, utilities could potentially see an increase in residential power consumption of up to 40 percent, according to Pacific Northwest National Laboratory. This charging would be during periods of very low demand, so a utility's total capacity would not necessarily need to be increased significantly.

However, the Project Better Place approach is closer to another charging scenario where utility capacity might be stressed. Specifically, batteries will need to be charged throughout the day. A study released earlier this year by the National Renewable Energy Laboratory, which simulated the impact of various charging scenarios, found that this type of continuous or on-demand charging would increase a utility's peak demand by 2.5 percent to 4.6 percent. Such increases would likely require that a utility would have to install additional capacity to accommodate this new load.

While the first plug-in hybrid electric vehicles are here now, most industry experts believe it will be several years or longer for them to have an impact. This gives utilities time to evaluate their options as to how to supply the additional electricity these cars will require.