

PowerGenix marches into Chinese hybrid car market

By Uclia Wang Jan. 10, 2012, 8:00am PT No Comments



If you're a car battery maker with any serious ambition, you need to have a China strategy. That's why San Diego-based PowerGenix spent the past year hunting for a partner in China and announced on Tuesday the formation of a joint venture with [China City Construction Corp.](#) to produce its nickel-zinc batteries for the so-called microhybrid vehicles.

Venture-backed PowerGenix already has a research facility with a small production line in the southern Chinese city of Shenzhen, and it plans to send samples of its batteries to yet-to-be disclosed Chinese automakers or car component integrators within 60 days, said Dan Squiller, CEO of PowerGenix. By the end of this year, the joint venture, called CCC- PowerGenix Clean Energy Co., will set up a factory to produce 400,000 batteries per year, or 200,000 watt-hours total, Squiller said. This plan is only the first of three-stage plan that will add similar production capacity during each phase, he added.

China City may seem an unusual choice for a partner to tackle the automotive market, its vast development and construction business has allowed it to establish close ties to car companies, Squiller said. The Chinese company invests and builds all sorts of projects for creating a city, from roads and bridges to water utility networks and parks.

And, yes, China City has the money and government ties to help PowerGenix establish a foothold in the world's largest car market. China City owns 51 percent of the joint venture and PowerGenix the rest, an arrangement set up to take advantage of various central and local government subsidies, Squiller said. The factory and the joint venture's headquarters

will be in the central-eastern province of Anhui, and the two companies are still negotiating with cities before deciding on a location.

PowerGenix builds batteries for stop-start, or micro hybrid, cars, which run on combustion engines but shut them off when coming to a stop at an intersection. This type of cars needs a more powerful and resilient battery than the conventional lead acid variety because it relies on the battery to keep the air conditioning, radio and other electronics on during the stop and to kick-start the engine after the light turns green.



Lead-acid batteries aren't so good at managing these stops and starts because they are less powerful at delivering that big jolt to electricity to start the engine and can't last as long as the nickel-zinc batteries, Squiller said. Nickel-zinc battery has **roughly six times** the power density of a lead acid version. Lead-acid's ability to hold the electrical charge also degrades quickly after this type of frequent

use, leading to a life span of roughly two years. PowerGenix's battery should last five years, Squiller said.

Stop-start cars, such as **Daimler's Smart ForTwo**, BMW 320d and Volkswagen **Passat BlueMotion**, are more common in Europe but not much in the United States partly because Europe has stricter emission reduction efforts. The hybrid cars deliver 5-10 percent better fuel economy than conventional gasoline cars, and that translates into lower tailpipe emissions as well. Because building a microhybrid cars is less expensive than a plug-in hybrid or all-electric vehicles – lithium-ion batteries are much more expensive – PowerGenix and other battery makers believe **microhybrids will become a lot more popular**, particularly in **countries such as China**, which is **big on promoting** hybrid cars or all-electric vehicles and wants to reduce tailpipe emissions.

Some automakers such as **General Motors** are showing off microhybrid cars at the North American International Auto Show in Detroit this week.

Microhybrid car offers “the lowest cost technology that gets you the biggest bang for the buck in terms of fuel economy and emission reduction. It’s perfect for China, which is a cost-sensitive market,” Squiller said

The bullish outlook for microhybrid cars has tempted other battery makers as well, [including lithium-ion battery maker A123 Systems](#). Some lead-acid battery makers, such as Axion Power (see this [CNET write up](#)), also are improving their technologies to compete with rivals that use different chemistries.

Images courtesy of PowerGenix and Daimler