Air-Powered Car Coming to U.S. in 2011

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While major auto manufacturers race to bring new electric and hybrid cars to market, other companies are looking at alternatives to electricity - including using air to power cars. The idea of an air-powered car is nothing new, and companies have been touting the technology for the past few years but for now not much has emerged in the way of a production model, largely due to flaws with the design of the vehicles.

In fact, many engineers are skeptical of the technology's use, as the energy required to power air-compressors in air-powered cars is massive compared to using that energy in an electric battery instead. But there are some distinct advantages to be found in the use of air-powered cars, namely their relative inexpensiveness when compared to complex hybrids and electric vehicles.

One such champion of this aspect of air-powered cars is the CEO of Zero Pollution Motors, a start-up that has developed its own compressed-air car that it hopes to bring to U.S shores by 2011. Heading up the company is Shiva Vencat, who says that while the "whole wide world" may criticize air-powered cars, at the end of the cars such as the Chevrolet Volt need a "massive lithium-ion battery" and hence the final cost to consumers skyrockets.

Conversely, Vencat claims that his compressed-air car will ultimately cost around $18,000 to $20,000 when it arrives in the U.S., or around $15,000 less than the upcoming Volt is expected to cost. This saving comes from not having to implement a complex electrical system in the car, and saving on battery costs.

Air-powered cars work by using an air compressor to pressurize air in the car's tank. When the car is driven at low speeds, the air is released, pushing the pistons up and down as in a conventional gasoline engine without the need for gasoline to provide combustion. At higher speeds the ZPM uses a small conventional motor to heat up the air in order to release it more quickly, as well as to compress more air to extend the range of the car.

The problem with this, as pointed out by numerous experts, is that plugging an air-powered car into a wall to compress air is inherently less efficient than plugging an electric car into the wall instead. The Zero Pollutions Motor air-car uses around six times as much electricity to cover the same distance as the Chevrolet Volt - ultimately, which one appeals to consumers will depend on their own needs but its not impossible to think of certain segments that could find an air-powered car useful.

As for the stats behind Zero Pollution Motors' compressed-air car, they read as impressively as any current electric car - seating for six people, fuel economy of 106mpg and 75hp from its six-cylinder engine, as well as a driving range of close to 850 miles.