

Electric Volt is a high-stakes bet for GM

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With the Chevrolet Volt, General Motors has placed a huge bet that its technology will work — and that consumers will want to buy it.

The Volt's mechanical layout is unlike that of other hybrids such as the Toyota Prius or Ford Escape. In those vehicles, gasoline engines and electric motors combine to provide power to the wheels.

In the Volt, the electric motor alone drives the wheels. There's a small gasoline engine, but it is connected to a generator. And all it does is recharge the lithium ion battery pack.



GM says that if the Volt is driven about 40 miles per day, it can run on electricity only, and the driver would never have to buy a drop of gasoline. GM picked that 40-mile distance because most Americans who commute to work drive 40 miles per day or less.

GM is racing against the clock to launch in 2010. If the car performs well, the Volt will polish GM's technology image. But the project carries big risks:

- It will be costly, with a price tag likely to top \$40,000. Can GM coax Congress into approving a subsidy for the Volt?
- Lithium ion batteries are an unproven technology. Early versions sometimes overheated and caught fire. Has GM licked this problem?
- Do consumers really want to plug in their vehicles at night? The Volt's big selling point is that you won't need gasoline as long as you recharge those batteries. But that appears to be at odds with the chief selling point of hybrid vehicles, which is that you don't have to plug them in — ever.

If this project fails, GM faces serious embarrassment. GM put its marketing machine into overdrive after the Volt enjoyed a rapturous reception at the 2007 Detroit auto show.

After the vehicle debuts, GM eventually may add versions powered by diesel engines or even fuel cells. But all this effort will be wasted if consumers don't flock to showrooms in 2010. In a campaign to burnish its green image, GM has put all its eggs in one basket.