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BUSINESS

GM Bolt Seeks to Rival Tesla

Auto Maker Shows Family Car That Gets 200 Miles on a Charge

By **JOHN D. STOLL**

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General Motors Co. unveiled plans for a \$30,000 electric vehicle called the Chevrolet Bolt that would be capable of driving 200 miles on a charge by 2017, a move to gain ground on Tesla Motors Inc.

GM showed a concept version of the Bolt on Monday at the Detroit auto show, eight years after the auto giant disclosed it would re-enter the electric car market with the Chevrolet Volt. The Volt, on sale since late 2010 and redesigned for 2015, is being upgraded to get better capability and sharper design, and has a backup gasoline motor on board in case juice runs out.

The Chevy Bolt, carrying a more capable battery manufactured by South Korea's LG Chem Ltd. , will be aimed squarely at Tesla's forthcoming Model 3, a \$35,000 electric car also slated to debut in 2017. The concept version of the electric car will be a hatchback designed to look more like a so-called crossover vehicle, according to people familiar with the design. The Bolt will be capable of driving four times farther than a Chevrolet Volt plug-in hybrid on a single charge.

GM has thus far struck out in its attempt to match its Silicon Valley rival. Recently, GM launched a \$75,000 Cadillac ELR plug-in car that failed to dent Tesla's dominance among luxury electric-vehicle buyers who have clamored for the Model S sedan.

By placing the Bolt in the high-volume Chevrolet line and giving it a name similar to the Volt, executives hope to polish Chevy's image as a full-line vehicle manufacturer prepared to meet demand, regardless of prices at the pump, according to people familiar with the strategy. GM expects the Bolt to compete globally, including in markets such as China. It is unclear if a car similar to the Bolt would be inserted in the Opel, Cadillac or

Buick brands down the road.

The Bolt represents the biggest risk taken by Chief Executive Mary Barra since taking GM's helm a year ago. Its development was approved when she was product chief under former CEO Dan Akerson. But U.S. gasoline prices have fallen below \$2 a gallon this year, hurting demand for electric cars.

While Tesla has sold relatively few Model S sedans since putting the car on sale in 2012, the Palo Alto, Calif., auto maker's shares have soared on investor hopes for the company's future.

Over Ms. Barra's first year at GM's helm, company shares fell 14% while Tesla shares soared 48%. Ms. Barra aims to have up to 500,000 electrified vehicles—including vehicles with partial-electric capabilities—on the road by 2017. In contrast, Tesla CEO Elon Musk has said he envisions up to 500,000 annual Tesla sales of pure electrics by 2020.

One factor motivating Ms. Barra is meeting regulations in the U.S., Europe and Asia that penalize full-line manufacturers when they sell too high a concentration of trucks and sport-utility vehicles, which are GM's sweet spots. Ms. Barra, however, has insisted the company won't build electric vehicles just "to check a regulatory box."



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AutoNation Inc. CEO Mike Jackson, who runs the largest U.S. auto retailer, said a vehicle like the Bolt shows a new attitude atop GM. The auto maker is now making big profits in the U.S. on its new trucks and SUVs in an era of low gas prices making the

investment into more capable electric vehicles look more like a moonshot than a sound business decision.

“The old GM would have milked the cash cow until it was dry,” Mr. Jackson said in an interview. The new GM, he said, is showing signs that it is willing to take the long view. He estimates electric cars will compose 2% of the U.S. market, at most, in five years. “The industry will lose money on it,” he said.

GM’s track record with electrics remains spotty. The company shut down EV1 production in 1999, pulling the plug on a \$1 billion electric-vehicle program that had impressed regulators but failed to reach commercial viability.

The Volt project started several years later. Heavily hyped by former GM CEOs and legendary product development chief Bob Lutz, the \$35,000 car has been a disappointment despite hefty government subsidies.

Fewer than 90,000 Volts have sold globally since it went on sale in late 2010, and only 1,500 were delivered in December. The introduction of pure electric vehicles, such as Nissan Motor Co.’s Leaf, which achieves 84 miles on a charge, and the relative success of Tesla’s pricey but more capable Model S sedan has overshadowed GM’s efforts.

The Volt is set for an overhaul in 2015. But it will be a smaller part of GM’s strategy than initially expected.

For Ms. Barra and other GM engineers, the Bolt’s proposed 200-mile range is critical because it is seen as addressing concerns about range long associated with electric cars, one person involved in the car’s development said. “Two hundred miles is seen as some sort of barrier where the notion of range anxiety goes away,” this person said.

Tesla has said its Model 3, due in 2017, will achieve about 200 miles on a charge. While less capable than the 85 kwh Model S, Mr. Musk plans to offer the Model 3 at a fraction of the price.

By the time the Bolt and the Model 3 hit the market, an onslaught of competitors, mostly from Europe, are expected to have long-range EVs available. Those cars, which could get more range, will likely be far more expensive than the Chevy.

While the electric car GM plans to build is far bigger than the economy car that has long been rumored, the Bolt will be smaller than Tesla’s Model S. The pouch battery cells that LG uses gives the auto maker flexibility to tuck the battery pack into a unique design in

the vehicle.

The pack for GM's new vehicle could be built in LG Chem's Holland, Mich., plant, where the Volt batteries currently are made by the same supplier. That plant would have a capacity to build about 60,000 Volt battery packs, or 20,000 of the larger packs for a new EV, or a mixture of the two.

LG Chems's battery improvements to make it possible to for GM to create the low-cost EV include better durability and electrical controls. Also, LG will use more of the available storage capacity in the cell than it does on the Volt. Plug-in hybrids can use less available storage capacity because of the constant charging from the gasoline engine. If more charge is used, it would limit the life of the battery.

"We have progressed far enough that it gives us a high level of confidence that in the 2017 kind of a time frame, there are no show stoppers or gotchas that we don't know how to get over," Prabhakar Patil, the chief executive of LG Chem Power Inc., the U.S.-based battery arm of the Korean electronics giant, said in an interview.

—*Mike Ramsey contributed to this article.*

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