

DRIVEN *TO LEAD*

SEDAN BY CODA. POWERED BY UQM. STYLING BY PORSCHE STUDIOS. BATTERY BUILT BY CODA JV.

IF A WORLDWIDE EFFORT is what's required to bring a new generation of efficient electric cars to American highways, then there's no better evidence of this than the Coda electric sedan. The drive to bring an exciting, modern, and appealing electric car to the market has truly tapped the world of talent available to the automotive industry, with great results. Key to this, of course, is not only providing quiet zero-emission operation, but also performance levels expected of today's vehicles – a task confidently handled by UQM electric drive technology beneath the hood. With 134 horsepower and 221 lbs-ft torque on tap from a small 90 pound, energy dense UQM PowerPhase® motor, electrifying performance is assured.





A PRACTICAL REVOLUTION

THE QUEST for the electric car has taken a series of twists and turns over recent decades, the result of technology challenges, high costs, and an industry that has avoided listening to the needs of the consumer. Any one of these presents a potentially insurmountable obstacle to a successful new model launch. Combined, they're a death knell. Consider this fair notice that from Coda Automotive's perspective, the electric car for the mainstream is very much alive.

CODA IS NOT A FASHION STATEMENT FOR THE ELITE. IT IS A MODEL FOR THE MAINSTREAM. TOGETHER WE CAN CHANGE THE WORLD...AND THE TIME FOR CHANGE IS NOW.

There's an abundance of wisdom in taking stock of what works, and what does not. The lessons learned from previous attempts to market electric vehicles are many...and they're important.

FRESH APPROACH

New car buyers want mainstream vehicles that fit into their daily lives, like a 5-passenger sedan. Active and passive safety systems and a high crashworthiness rating are paramount. Comfort is always

high on the list, as is in-cabin entertainment and electronics. And these days, the ability to drive without using a drop of petroleum is more desirable than ever.

Enter the Coda, a 4-door all-electric sedan with 5-passenger seating and an impressive list of standard features, among them a telematics package, turn-by-turn navigation, a "green screen" that monitors driving efficiency, roadside assistance with an emergency button, and Bluetooth. Entertainment electronics include an AM/FM/XM radio with Sirius satellite capability and MP3/USB connectivity.

Power windows, doors, and mirrors also come standard along with aluminum wheels and a security system. Anti-lock brakes with electronic stability control and advanced airbags with an occupant detection system come as a matter of course. The Coda is expected to carry a 5-star crashworthiness rating. It will be backed by a 3 year/36,000 mile warranty with the battery covered for 8 years/100,000 miles.

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Energized by a 33.8 kWh lithium-ion battery built by the Coda joint venture, the Coda's real-world driving range of 90 to 120 miles will satisfy 94% of typical daily driving routines. Its on-board charger conveniently plugs into standard 110 or 220 volt outlets, with a 220 volt charge delivering enough energy for a 40 mile drive in about two hours or a full charge in less than six hours. Of course, driving a Coda on electricity is much more affordable than driving a gasoline car. In fact, it's estimated that on average, driving a Coda 100 miles will cost less than \$3, compared to \$17 in a gasoline sedan that averages 20 mpg.

A SOUND STRATEGY

Coda's strategy is simple: In 2010, initially in California, begin delivering what a growing number of consumers desire – a stylish and full-function electric car – at a price consistent with what buyers already are willing to spend on existing vehicle models. The Coda is expected to sell for \$45,000, with the bottom line to consumers falling in the mid \$30,000s after a \$7,500 Federal tax credit and possible state incentive. And once a Coda purchase takes place, the real savings begin. The Coda's electric drive system has a fraction of the moving parts of a standard combustion engine, and that means less wear and tear, fewer trips to the mechanic, and a longer life span. In fact, overall savings in operating and maintenance costs are estimated to be about \$10,400 compared to a gas car over a 5 year period.



WORKING SILENTLY BENEATH the skin of the Coda electric car is UQM Technology's highly efficient PowerPhase® 100 electric drive system. A compact 11 inches in diameter and 10 inches long, the PowerPhase® electric motor weighs hundreds of pounds less than an internal combustion engine. Yet, this is no lightweight when it comes to performance, providing V-6 like acceleration with loads of low-end torque.

"The UQM PowerPhase® 100 electric propulsion system delivers spectacular torque and energy efficiency that will enable the Coda sedan to deliver an exceptional driving experience and reliable operating range," points out Kevin Czinger, Coda Automotive's President and Chief Executive Officer. While the Coda uses a PowerPhase® 100 system to balance performance with energy efficiency, UQM's PowerPhase® motor technology is scalable and systems with varying levels of horsepower and torque are available in the UQM line.

Focusing on efficiency is particularly important in battery electric vehicles, where making the most of available on-board energy is essential to maximize driving range. With its high power-to-weight ratio and peak system efficiency of 94 percent – worlds better than internal combustion engines that typically convert only 25 to 35 percent of their fuel energy to propulsion power – UQM's PowerPhase® systems are ideally suited for the job.

Frederick, Colorado-based UQM Technologies (www.uqm.com) supplies electric drive systems to many automotive OEMs. The company develops and manufactures technologically advanced motors, generators, and power electronic controllers for the automotive, aerospace, military, and industrial markets.



- 1 Electronic Stability Control > Continental
- 2 DC/DC Converter > Delphi
- 3 Inverter > UQM
- 4 Motor > UQM
- 5 Transaxle > BorgWarner
- 6 Electric Power Steering > Delphi
- 7 Electric Vacuum Pump > Hella
- 8 Battery Management System > Energy CS
- 9 Charger > Lear
- 10 Main Controller > OMITEC
- 11 Battery > CODA Battery Systems
- 12 Electric AC Compressor > Mitsubishi



THE CODA ALL-ELECTRIC SEDAN IS MUCH MORE THAN THE SUM OF ITS PARTS. BUT THOSE PARTS ARE IMPORTANT ELEMENTS THAT DEFINE WHAT THE NEW CODA IS ALL ABOUT.

THE AUTO INDUSTRY is capital intensive by nature, driven by the need for enormously expensive manufacturing facilities, intensive research and development activities, and the myriad layers of management and infrastructure that typically comprise a major automaking enterprise. Coda Automotive operates differently, embracing a non-capital intensive business model with strategic global collaborative partnerships. It's an approach that enables Coda to manage the complexities of auto manufacturing and distribution in a lean and flexible way.

NEW BUSINESS MODEL

Rather than developing a new electric model from the ground up, Coda identified an existing platform manufactured by HaFei Automobile Industry Group Co. Ltd. that could be the basis for its new electric vehicle. HaFei, a leading automobile production and R&D company in China, has over 575,000 square meters of production facilities and an annual production capacity of 400,000 automobiles.

Coda tailored the Body in White – an assembled car without components like motor, trim, and electronics – for its purposes with styling and other updates by Porsche Design Studios. An advanced PowerPhase® 100 electric powertrain by UQM Technologies was integrated, along with other world class components from an array of primarily Tier One auto suppliers. This approach enabled Coda to compress the time it normally takes to bring a new vehicle to market.

A ready supply of advanced lithium-ion batteries – the chief enabling technology for electric cars – was also secured through a joint equity venture with Tianjin Lishen Battery Joint-Stock Co. Ltd. (Lishen), one of the world's largest manufacturers of lithium-ion cells. A key element of Coda's growth plan is a new battery factory in Enfield, Connecticut,

part of a new joint venture called Coda Battery Systems.

"We plan to deliver series production all-electric vehicles to the California market in mid-2010," says Kevin Czinger, President and CEO of Coda Automotive. "Today we are unique among companies in that we have mass assembly facilities already in place for our chassis and driveline assembly, and a vertically integrated battery design and manufacturing capability through our exclusive equity joint venture with Lishen."

The strength of Coda's innovative business model has found the company raising capital even under today's challenging market conditions. A recently closed Series B investment round totaling \$24 million attracted high caliber investors including Henry M. Paulson, Jr., former U.S. Secretary of the Treasury under President George W. Bush. Mr. Paulson, who led the US-China Strategic and Economic Dialogue while Treasury Secretary, has also joined Coda's advisory board and will provide guidance on the company's Chinese partnership activities. Other investors in the recent investment round include Thomas "Mack" McLarty, former Chief of Staff for President William J. Clinton, and Thomas F. Steyer, founder and co-managing partner of Farallon Capital Management.

Coda Automotive's pioneering plan to brand, design, and manufacture an all-new, leading-edge electric vehicle continues to gain momentum, leveraging talents on a global scale to make a much needed car a reality.



For additional information on the Coda electric sedan, visit www.codaautomotive.com.
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