

500 Miles On 1 Charge: Motorcycle Ride From San Fran to L.A. Would Set Record



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By Abigail Bassett

Richard Hatfield is no stranger to setting records in alternatively powered vehicles. He began his career on a team that built an electric Porsche race car back in 1995.

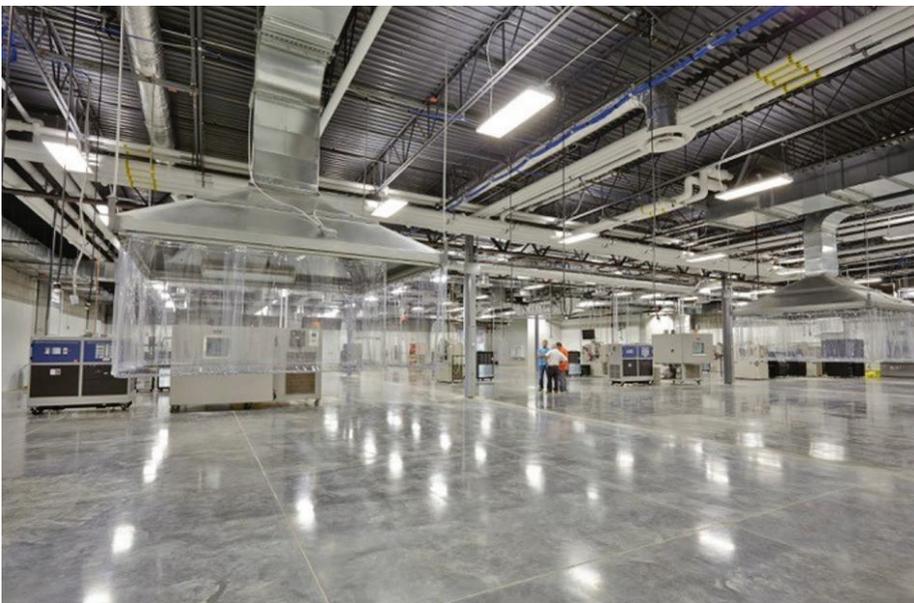
After that experience, Hatfield said he was convinced that electric powered vehicles were far superior to gasoline powered, and by 2006 he and his company, Lightning Motorcycles, had built and tested an electric sport bike. Three years later, Lightning was breaking the land-speed record for an electric powered bike, and in 2013, they won the grueling and dangerous Pikes Peak race.

Today, as the head of Lightning Motorcycles in Silicon Valley, Hatfield has his sights set on a new record: creating an all-electric motorcycle that can do the 500-mile run between San Francisco and Los Angeles on a single charge. But Hatfield is not going it alone. He's enlisted the help of the Battery Innovation Center in Indiana, and said that without the bleeding-edge technology that comes out of the facility, the ride would be impossible.

Going The Distance

The feat is a tall order considering that the longest electric vehicle range among commercially available motorcycles and cars is just an [EPA rated](#) 315 miles, a record that currently belongs to Tesla. Hatfield, however, thinks it's doable even though no gasoline bike can currently do more than 320 miles on a single tank.

"We see ourselves as following in the footsteps of Tesla, and accomplishing the San Francisco-to-Los Angeles run would show that range anxiety is becoming a thing of the past," he said.



The Battery Innovation Center in Indiana has carved out a unique role nationally since opening four years ago as an aggregator of energy storage solutions. Credit: Battery Innovation Center.

Hatfield turned to the center after a number of conversations with its president, David Roberts. The center is a nonprofit that works with industry leaders, universities and government agencies to rapidly develop, test and commercialize batteries and storage systems that are safe, reliable and lightweight. The center has been around since 2013 and works out of a 36,000 square-foot purpose-built facility in the town of Newberry. Its partners and nonprofit members are varied and include the State of Indiana, the Japanese technology giant NEC and Duke Energy, one of the largest energy providers in the United States.

"We work with companies like Lightning to pair them with cutting edge energy storage makers to make things like the 500-mile ride possible," Roberts said. "We think that with the technology as it stands, right now, the ride is entirely achievable."

Lab Coats With Blue Collars

Lightning isn't the only Silicon Valley company working with the center. Because many companies like to stay quiet about what they might take to market next, Roberts was only willing to say that they are working with a major Silicon Valley-based company that is creating drones to bring internet connectivity to underserved areas. He also said the center is working with another well-known, unnamable, company to create flexible batteries for wearables.

"Companies come to us for energy storage solutions that may not be ready for prime-time just yet," Roberts explained. "They come to us saying, 'I need so much energy in so much area. Can you do it?'" From there, we help develop, test and manufacture the batteries in the hopes of helping these companies turn breakthrough technology into commercially available batteries that can handle real-world demands."

The center's reputation, like so many highly regarded research facilities, stems from the quality of the work and the people behind it. Because the center created a role for itself as a national "aggregator of energy storage solutions," it possesses a unique culture that many of the engineers, chemists and scientists who work there find appealing, Roberts said.

"The workforce has a blue collar mentality about work even though we are in a lab coat environment, and that gives them a certain stickiness," he said. "You don't get people who are here for six months and looking for the next thing. That kind of culture lends itself to the quality of work and kind of work we do."

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