

Weekly Review of the World of Electric Vehicles

EV WORLD

INSIDER ILLUSTRATED

EDITION 12.34

A cyclist wearing a yellow jacket, a colorful helmet, and sunglasses is riding a bicycle with panniers. The background shows a grassy field and a body of water under a blue sky with clouds.

E-PEDALING MONGOLIA

PLUS...

THE MUD CONUNDRUM
INFINITI LE ELECTRIC CONCEPT
REPOWERING LIVN GRN

\$1.39US



IT'S PERSONAL: Who Is John Galt?

Would you believe that until now, I had no idea who John Galt is? We have a street here in Omaha named after him, one that winds through a local business park near where my wife works. Imagine my surprise when I learned he's a fictional character in an Ayn Rand novel. In a 64-page long monologue, he extols the virtues of egoistic self-interest. He views altruism as a 'basic evil,' and sign of moral weakness, not strength. His creator, a Russian emigre who took her view of life from Friedrich Nietzsche – whose philosophy also inspired Adolf Hitler – would pen several monumental tomes that would come to influence the likes of Alan Greenspan, Ron Paul and Paul Ryan; as well as the radical right-wing Tea Party in America. In a recent Forbes column entitled, "Who Is John Galt?," Rob Clarfeld writes that Rand's fictional pure capitalist, "epitomizes all that is glorious of capitalism in its purist form -- innovation, self-reliance, and freedom from government interference." But he also observes, "that the set of solutions to today's highly complex and intertwined economic challenges aren't quite as binary as those of the fictional characters we create." For all her theorizing on the evils of government, in her latter days, Ms. Rand found herself relying on the very government programs she and her acolytes now villify: Social Security and Medicare.

EV WORLD[®] INSIDER

A publication of EV World.com, Inc.
P.O. Box 461132
Papillion, NE 68046
United States of America

Publisher & Editor in Chief

J. William Moore
bmoore@evworld.com

SUBSCRIPTIONS

Subscription to EV World INSIDER, and premium access to EV World.com is \$49.00US annually.

ADVERTISING

Direct advertising inquiries to marketing@evworld.com or call 402.339.9877 during normal business hours U.S. central time.

About Illustrated

EV World Insider Illustrated is published weekly by EV World.com, Inc. It is provided to premium subscribers as part of their annual \$49.00 subscription fee.

Its editorial mission is to provide a more comprehensive and visually exciting narrative of the people, products and policies that are the core of a cleaner, safer, more sustainable world of mobility in the 21st century.

Share your impressions and comments with us at publisher@evworld.com.

About the Cover

Pedelec Adventure's Ondra Vetrusky rides across the sweeping steppes of Mongolia on a Reise & Muller electric-assist bicycle powered by a Bosch e-drive system, which proved trouble-free over the two week nomadic journey. Accompanied by Susanne Bruesch, the couple kept their batteries recharged using flexible, thin-film solar sheets. It turns out that Mongolians also use solar to power their Yurts.



Ondra Vetrusky temporarily swaps his electric bike for a Mongolian pony.

E-PEDALING MONGOLIA

Mongolia is a sparsely populated land with only one major city, the capital in Ulaanbaatar. Its 2.75 million people are spread across steppes and mountains at a density rate of one person for every five square miles, one of the lowest rates on the planet. But it was from here the great Mongol Empire rose in the 13th century to conquer Asia and threaten Europe.

And it is across this sweeping land that Ondra Vetrusky and Susanne Bruesch rode their solar-charged, electric-assist bicycles for two weeks this summer, starting at the geographic center of the country, near Ovorkhangai, and riding, often off-road, cross country, to the ancient capital of Karakorum, a distance, as the crow flies, of 163 km (100 mi). Of course, in a country where few roads exist, the actual distance on the ground was much further, and while their Bosch-powered e-bikes can easily manage 100 km per charge -- they each carried

three spare batteries that were charged by thin-film solar sheets -- the most they traveled on bad roads or no roads at all was 20 km, packing 160 kg of food, tents, water, spare parts, electronics, clothing stored in their uni-wheel trailers and bike bags.

Both adventurers speak Russian, but ended up, Bruesch explains in an interview with EV World, using "our hands and feet" to communicate with the people they met along the way. This isn't the first time the Bruesch has ventured far from her home in Germany. Previously, she and Sebastian Ploge trekked, again by e-bike and solar trailers through a stretch of Saharan Morocco. Since returning, Vetrusky and Bruesch are telling their story at some of Europe's largest bicycle shows. By the time you read this they'll be at the biggest one, Eurobike in Friedrichshafen

Karakorum, Mongolia
Kharkhorin, Mongolia



Ovorkhangai, Mongolia

Ondra Vetrusky and Susanne Bruesch begin their e-bike adventure near Burt, the historic center of the country, traveling north to the old capital and monastery city of Karakorum, Mongolia.



Kharkhorin, Mongolia



Walled monastery complex in Karakoram, outside the city. Many of the dozens of monasteries inside the complex were destroyed during the Soviet era. ABOVE: visitors to Pedelec Adventure's campsite.

Ondra prepares for another day's travel with custom uni-wheel trailer loaded with camping gear, clothing and spare batteries. BELOW. Buddhist monk tries out one of the e-bikes.



Freelance journalist 'Susi' Bruesch pauses after a speedy uphill ride on the Delite Touring by Riese & Mueller. Mongolian yurts use solar panels to power lights, cellphones and, yes, televisions; so solar-charged ebikes would be a nice fit to their nomadic lifestyle, Bruesch observed. However, you can't get more than a mile from one, so horses will continue to be an important part of Mongolian life.







MONGOLIA: PUTTING BOSCH E-BIKE DRIVES TO THE TEST

Ondra Vetrusky and Susanne Bruesch completed their two-week Pedelec Adventure – the official name of their nomadic odyssey – in Mongolia, riding two different makes of Germany e-bikes, both equipped with Bosch electric-assist: a new Kreidler cross bike and a Riese & Müller touring bike. According to Bruesch, who is an internationally-published freelance journalist in Europe, the trip was entirely free of technical problems with the bikes.

As currently required across the European Union, electric-assist can only be applied to the bike as the rider pedals. The more force they exert, such as hill climbing, the more torque the e-drive system can offer, currently up to a maximum of 350 watts of power, in the case of Bosch's e-drive system, which is intend-

ed only for OEM installation. No add-on kits are available. The complete Bosch system consists of a 288 Wh lithium battery operating at 36V with an 8 Amp hour capacity, along with the motor drive unit rated at a nominal 250W, which incorporates three sensors: torque, pedal speed and bike speed. The battery can be mounted on the frame or on a rear wheel rack. The charger can handle either 110V or 230V AC. The HMI display mounted on the handlebars allows the rider to set four power modes: eco, tour, sport, and speed. Electric assistance is limited to a top speed of 45 km/h (27 mph). The maximum per-charge range depends on which level and mode selected from Eco1 (145 km/90 mi) to Speed3 (60 km/37 mi). That is, course, on nice level roads, not the Steppes of Mongolia.



ABOVE: Kreidler cross bike. BELOW: Riese & Müller touring bike, both equipped with Bosch pedelec electric-assist drives.

