

Blue Solutions demonstrates 70% more Autonomy with its breakthrough GEN4 Lithium-Metal Batteries

November 17, 2025, Paris, France – Blue Solutions, a subsidiary of the Bolloré Group, is demonstrating the advantages of its GEN4 technology by achieving 68.8% more autonomy with an electric 2-wheeler.

Blue Solutions, the global leader in industrial-scale design and manufacturing of solid-state batteries, continues to set the benchmark for innovation in the energy storage field.

With a legacy in R&D dating back to the 1980s, Blue Solutions remains the world's leading producer of solid-state cells, modules and packs with a manufacturing footprint in France and Canada since 2011.

In recent years, Blue Solutions advanced its technology through multiple prototypes based on its latest generation of lithium-metal batteries, GEN4, showcasing significant advantages over conventional battery systems.

Early in 2025, the company launched project BeeWi, an Electric 2-Wheeler, with a clear expectation: develop a plug-and-play solution that delivers breakthrough energy density, therefore autonomy, without altering packaging and weight.

On October 2, 2025, under the supervision of a Bailiff, Blue Solutions conducted a controlled test at its Quimper facility, using an electric scooter from Breton manufacturer Easy-Watts. The first trial with the original battery system, achieved a range of 62.9km, followed by a second trial based on the company's unique new technology.

The vehicle powered by the new battery has demonstrated a 68.8% higher autonomy versus the original battery, by outreaching 106km in total. The new battery, while maintaining identical geometry, has further achieved a 13% reduction in weight. For a passenger vehicle, this breakthrough could translate into a leap from 600km to more than 1,000km per charge.

Both tests adhered to a very strict driving protocol with identical speed zones, climate and drive conditions. Both original and innovative battery systems used NMC¹ cathode for comparability. The BeeWi scooter integrates Blue Solutions' full expertise - from thin film manufacturing to complete battery system integration - demonstrating the viability of lithium metal batteries with ultra-thin 30µm anodes, and advanced polymer electrolytes operating at ambient temperatures. The battery solution delivers plug-and-play simplicity without compromising integration.

To enhance safety and user experience, Blue Solutions also introduced BeeWatch, a real-time monitoring system providing key battery metrics to the driver and wirelessly to a control tower.

"This is the beginning of a new era; our teams are demonstrating on a daily basis the benefits and reality behind lithium-metal batteries. With this demonstrator, we have over-achieved the expected performances, and we are beyond excited by the world of opportunities in front of us. We collaborate already with one of our Joint-development partners on exploiting these results in the booming 2-wheelers market, especially in Asia. We will continue demonstrating with real field applications and with real data that we walk the talk, delivering according to our roadmap" Richard Bouveret, CEO and Chairman of Blue Solutions.

¹ Nickel Manganese Cobalt



GEN4 prototype cells



Test Drive



Prototype module

About Blue Solutions

Blue Solutions is a pioneer in solid-state battery design and development and has been working on large-scale industrialization of solid-state batteries for 14 years. The company is based on two continents, in France (Brittany) and Canada (Quebec). It holds ISO 9001, ISO 14001 and IATF 16949 certifications at its production sites, demonstrating its commitment to quality and environmental responsibility. Its cutting-edge technology and its focus on advancing battery technology put Blue Solutions at the forefront of clean and efficient transport, shaping the future of sustainable mobility. With more than 20 years of research and development experience, Blue Solutions is accelerating the development of its 4th and 5th generation of solid-state batteries while setting up joint developments and partnerships to bring the right product to the passenger mobility sphere as of 2029. Further information can be found at www.blue-solutions.com.

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