



Wright Electric and Columbia University Receive U.S. Department of Energy Award for Ultra-Lightweight Battery Development

Malta, NY (February 27, 2024) - Wright Electric, in collaboration with Columbia University, is pleased to announce that they have been awarded a contract from the U.S. Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E) Pioneering Railroad, Oceanic and Plane Electrification with 1K energy storage systems (PROPEL-1K) for their groundbreaking work on developing an ultra-energy-dense aluminum battery and novel artificial intelligence electrolyte screening system.

"ARPA-E is continuing to catalyze entire new industries with the PROPEL-1K program," said Jeff Engler, CEO at Wright Electric. "We are excited to work with Columbia University to push the boundaries of battery technology and to contribute to the advancement of sustainable energy solutions."

Founded in 2016, Wright's goal is to decarbonize the aerospace industry with electric aircraft. Wright works with leading groups such as NASA, Y Combinator, The U.S. Department of Energy Advanced Research Projects Agency-Energy, and the U.S. Department of Defense. Wright recently announced that its industry-leading 2 megawatt (MW) powertrain achieved [43,000 ft of simulated altitude testing without partial discharge](#).

Wright [launched its battery program in October 2023](#) after years of stealth development. The company's proprietary batteries are designed to be 4x more energy dense than the lithium ion batteries that power today's electric vehicles. Such batteries would enable the electrification of hard-to-decarbonize transportation sectors, for example, electric aircraft with 100 passengers and container ships. Given that the vast majority of aerospace carbon emissions are in aircraft with 100 or more passengers, these batteries would enable a paradigm shift in decarbonization.

Wright's Automated Experimentation with Radical Electrochemical Systems (AERES) technology uses a combination of systematic screening and open-source hardware to rapidly screen electrolytes for these batteries.

"It is straightforward to construct an aluminum battery with household ingredients," says Engler. "But it is hard to make one that has the efficiency and high power output necessary for vehicles."

Wright's participation in the PROPEL-1K program will further support the development of these batteries.

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