EcoCAR Innovation Challenge Unveiled

New North American collegiate competition will accelerate innovation and build next-generation workforce for mobility and tech sectors

DETROIT, September 30, 2025 — The Advanced Vehicle Technology Competitions (AVTC) series released a Request for Proposals (RFP) today for university teams to participate in the EcoCAR Innovation Challenge, a new North American collegiate competition that fosters the next generation of mobility innovators.

The 15th installment of the AVTC series, EcoCAR is produced by a public-private consortium that includes automakers General Motors and Stellantis, as well as technology partner MathWorks. The program is managed and executed by Argonne National Laboratory (Argonne). The competition is also seeking additional strategic partners for this competition that will kick off in Fall 2026 and run for four years.

EcoCAR will challenge university teams to develop energy-efficient and intelligent mobility solutions utilizing emerging technologies, including artificial intelligence (AI) in engineering tools, machine learning, and exascale computing. Teams will also explore modifications to the vehicle propulsion system to optimize overall vehicle efficiency through the design and integration of electric motor systems and team-built, high-voltage batteries. General Motors and Stellantis each sponsor one of the two competition tracks that provide distinct engineering challenges and vehicle platforms that reflect choices in mobility offered to North American customers.

“This initiative marks a significant departure from the norm, since automakers and software developers typically operate independently and are driven by fierce competition and proprietary advancements,” said Kristen Wahl, Department Director, Strategic Transportation Education and Partnerships (STEP) at Argonne National Laboratory. “Given the pressing need for workforce development and innovation in the auto industry, we have brought these giants together under a common goal.”

Successful teams will be highly interdisciplinary, bringing together students and faculty from engineering, computer science, business, entrepreneurship, project management, marketing, and communications. Operating as mock automotive startups, teams will

follow industry product development and engineering processes to deliver products and mobility solutions that address real-world customer needs.

“Teams that earn their way into the EcoCAR Innovation Challenge will take on real-world challenges that prepare them to shape the vehicles and experiences of tomorrow,” said Micky Bly, Senior Vice President, Head of Propulsion Systems Engineering, Stellantis. “As they push the boundaries of engineering and teamwork, these students will grow into the next generation of innovators and leaders shaping how North America moves for years to come.”

"EcoCAR is more than competition—it's a launchpad for the future of mobility, powered by talented students across the country," said Ken Morris, Senior Vice President of Product Programs, Product Safety, Integration and Motorsports at General Motors. "By challenging these students to get hands-on and innovate in advanced propulsion systems, vehicle connectivity, and autonomous technologies, we're cultivating the next generation of engineers who will drive the breakthroughs of tomorrow."

“MathWorks is proud to be a headline sponsor of EcoCAR, equipping student teams with MATLAB, Simulink, and Model-Based Design tools to rapidly design, simulate, and validate next-generation vehicle software and systems. With access to our AI- and simulation-driven engineering workflows, along with training and technical support, students can collaborate across disciplines, iterate faster, and graduate ready for the software-defined vehicle era,” said Lauren Tabolinsky, Senior Manager, Student and Academic Global Programs, MathWorks.

For information about the EcoCAR Innovation Challenge and the RFP process, universities are encouraged to monitor official competition communications from Argonne at https://avtcseries.org/

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