



### **About Advanced Vehicle Technology Competitions (AVTCs):**

Established in 1988 by the U.S. Department of Energy and Argonne National Laboratory in partnership with North America's automotive industry, Advanced Vehicle Technology Competitions (AVTCs) are a series of multi-year automotive engineering competitions and DOE's flagship workforce development program for future automotive engineers. AVTCs engage students from kindergarten through higher education, creating a pipeline that both encourages students to pursue careers in science, technology, engineering, and math (STEM) and has seeded more than 30,000 graduates into the industry, helping to build the diverse workforce needed for the U.S. to be competitive in the global marketplace.

### **Mission:**

AVTCs harness the knowledge and resources of government and industry with the brightest minds in academia to empower the next generation of engineers and business leaders to develop solutions to our nation's toughest transportation challenges while providing students with an unparalleled and immersive educational experience and real-world training ground that transforms the traditional classroom into a hub of automotive innovation. AVTCs seed the industry with a highly skilled and knowledgeable workforce that will shape future energy-efficient automotive products and achieve DOE's goal of net zero emissions by 2050.

### **Vision:**

Transform STEM education and training to accelerate and deploy a skilled and diverse workforce better prepared to advance our nation toward electrification, decarbonization, and other climate change actions, enabling the U.S. to achieve net zero emissions by 2050.

### **Goals:**

1. **Create an immersive and unparalleled educational experience for students** centered around experiential learning that transforms the traditional classroom into an automotive hub of innovation.
2. **Establish a multidisciplinary team environment that mimics an automotive start-up** and draws upon disciplines beyond engineering.
3. **Provide a real-world training ground for future engineering leaders**, exposing them to industry tools, components, processes, best practices and standards, challenging them to solve complex problems and achieve industry-standard milestones and vehicle specifications.
4. **Implement a national STEM and community outreach program** to attract youth into STEM careers, build awareness within underserved communities, and broaden opportunities for underrepresented minorities to participate in AVTCs and future mobility careers.
5. **Design and implement purpose-built education, training, and experiential learning** that better prepares students for future careers in mobility.
6. **Build a skilled workforce that reflects the diversity of North America** that is better prepared to advance our nation toward electrification, decarbonization, and other

climate change actions, enabling the United States to achieve net zero emissions by 2050.

**Current and previous AVTC series include:**

13. EcoCAR EV Challenge (2022–2026)
12. EcoCAR Mobility Challenge (2018–2022)
11. EcoCAR 3: An Advanced Vehicle Technology Competition (2014–2018)
10. EcoCAR 2: Plugging Into the Future (2011–2014)
9. EcoCAR: The NeXt Challenge (2008–2011)
8. Challenge X: Cross to Sustainable Mobility (2004–2008)
7. FutureTruck (1999–2004)
6. Ethanol Vehicle Challenge (1997–2000)
5. FutureCar Challenge (1995–1999)
4. Propane Vehicle Challenge (1995–1997)
3. HEV Challenge (1992–1995)
2. Natural Gas Vehicle Challenge (1990–1993)
1. Methanol Marathon (1988–1990)

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