

EV CHARGING & INTEROPERABILITY TESTBED

An exclusive and dedicated environment developed on the needs of the industry and EV ecosystem

The rapid shift to vehicle electrification with a quickly expanding number of electric vehicles and EVSE charging stations from a variety of manufacturers brings with it significant challenges, particularly around ensuring all platforms work seamlessly. The ACM EV Charging & Interoperability Testbed will address the critical need for interoperability testing and collaboration.



Conceptual illustration of the proposed ACM EV Charging & Interoperability Testbed

New EVSE Testing Location & Consortium Driven by Needs of Industry and the EV Ecosystem

As the electric vehicle (EV) market continues to grow in the U.S., automakers (OEMs), Charge Point Operators (CPOs), and EVSE Manufacturers have identified a lack of sufficient test facilities and interoperability testing as critical barriers to overcome. These challenges threaten to slow the adoption of EVs in the country. In response to these concerns, a new test environment has been developed in Ypsilanti, Mich., near Metro Detroit.

The American Center for Mobility powered by Intertek (ACM) has taken the lead to establish a state-of-the-art EV Charging & Interoperability Testbed to address these critical needs for EV charging and interoperability testing and collaboration. The center has worked closely with industry stakeholders to gather the requirements for their specific needs, including equipment, testing, and engineering support. The stakeholders have called for a collaborative, pre-competitive environment to better address the current issues of interoperability.

To address these needs, ACM will establish a physical test facility, one of the first of its kind in the U.S. The facility will provide accessible testing for the upper-Midwest region, where no such facility currently exists. With this new test environment, automotive and electric vehicle engineers, and EV charge station companies can come together to collaborate and address critical issues that may limit the widespread adoption of electric vehicles.

Benefits of Participation

There are several benefits of becoming a contributing sponsor of the ACM EV Charging & Interoperability Testbed facility, including:

- **Location and Access to EV Chargers and Test Cases:** ACM provides a neutral, independent 3rd party R&D location for electric vehicle and EVSE engineers to collaborate and address shared industry challenges. The ACM EV charging environment includes a variety of different EV chargers, both DC fast chargers (DCFC) and Level 2 AC chargers, from different providers for testing and development. This testing environment allows OEMs, CPOs, and EVSEs to have easy access to test each equipment, connections,

networking, and more, ensuring efficient charging and data exchange. Charge network and equipment companies can benefit from the ACM's established location for vehicle testing and data at scale, including a multitude of vehicle test cases and data logs, both production and prototype vehicles. Additionally, CPO/EVSE partners will have high visibility and direct access and dialogue with the OEM user community.

- **Advisory Council for EV Charging & Interoperability:** Advisors from OEMs, CPOs, and EVSEs collaborate in a pre-competitive environment to provide input and guidance to ACM. The Council aims to identify critical gaps and opportunities across the shared EV charging ecosystem, with a priority focus on defining the critical interoperability challenges, gaps, and needs. Council members will discuss and participate in the development of requirements, process, methods, test cases, etc. aimed at addressing these interoperability issues. The purpose is also to understand collective needs and future requirements for further development of the ACM testbed and identify other ways to support the evolving EV ecosystem. The Council will be led and facilitated by

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ACM, with strict adherence to anti-trust guidelines. OEMs, along with CPO, and EVSE Manufacturers providing DCFC equipment and support for the testbed, and other stakeholders may join the Council.

- **Testing, Data & Feedback:** ACM provides a controlled field deployment, which can be used for internal development activities, testing of charging systems on prototype and pre-production vehicles, and ensuring interoperability and continuous improvement. ACM's reliable electrical infrastructure and high-speed networking capability provide an ideal location for testing charging performance and software solutions like cloud-based/IOT platforms, debugging, and validation efforts in a controlled setting. Recent studies and surveys have shown challenges in charge station reliability and readiness, making ACM's testing environment an invaluable resource for bolstering your capability and business success.
- **On-site Support & Asset Maintenance:** The ACM facility has resources available to support any effort that can help achieve your organization's goals. From engineering and technician support to event coordination, the ACM team can be your one-stop location for everything from technology development and demonstrations to launch and promotion opportunities.
- **Facility Access for Demonstrations and Showcasing Opportunities:** ACM's location in Southeast Michigan provides an ideal location for product demonstration and electrification solutions, as approximately 80 percent of North American automotive research and development takes place in the greater Detroit area. ACM provides additional capabilities for your internal engineering efforts or hosting an event, including access to environments from test track to garage/lab space.



Existing electrical infrastructure includes a 90MW substation with 2.2MW off-grid backup

- **Product Showcase, Launch, and Marketing:** ACM offers an exclusive ecosystem that includes access to leading OEMs and a network of partners, clients, and government agencies. Highlight your charging solution onsite at ACM, a 500-acre connected and automated vehicle technology proving ground. ACM hosts hundreds of visitors per week, creating a location of high visibility to OEMs, tier suppliers, government, academic institutions, and other relevant groups in the electrification industry. Leverage ACM's marketing team resources to increase your group's visibility through various forms of ACM-generated content, such as social media, events, video productions, and mutual collaboration marketing efforts.


For additional information, please visit www.acmwillowrun.org.

500+
ACRES

The size of the variable road systems and customizable test environments available at ACM.


FOR MORE INFORMATION

Intertek

 +1-248-924-1269

 joseph.scanlon@intertek.com

American Center for Mobility

 +1-734-482-0701

 info@acmwillowrun.org

 acmwillowrun.org