MIT Electric Vehicle Team

PARTNER PACK

2023-2024

2023-2024 Partners

Our partners make our work possible.

We thank them for their support and collaboration, enabling us to further the important work we do in building a cleaner future for all.

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Our Team

MIT Electric Vehicle Team (EVT) is a student-led team at MIT dedicated to the design and development of hydrogen-powered vehicles.

With over 15 years of experience in electric vehicle design and development, we are now pushing the bounds of hydrogen-powered vehicle technology to develop the solutions required for the energy transition. Our team is one of the only organizations in the world that allows undergraduate students to get hands-on experience in fuel-cell and hydrogen technologies.

We have a passion for **open-source**, **accessible research**, meaningful **community engagement**, and **speed** with an understanding that this does not have to clash with our goals to be a carbon negative society. Through our current project developing a hydrogen fuel cell motorcycle from a Ducati 900ss, we created the first fully open-source, high-efficiency, affordable, power unit of the future that can act as a proof-of-concept for hydrogen vehicles.

Our Mission

Accessible **Economical** **Equitable**

Green Hydrogen

6% of global emission reduction will come from **hydrogen** technology within the IEA's Net-Zero Emissions by 2050 plan [1]

29% of US GHG emissions come from the transportation sector [2]

Hydrogen **<u>needs</u>** to become a key player in the global energy economy to facilitate a transition to green energy, especially within transportation.

Our team works to further this movement through innovative technology while offering the ability for anyone to learn the rigorous, detailed engineering that goes into clean energy systems regardless of race, gender, socio-economic status, or educational background. This is a core value of our team that reflects our commitment to Diversity-Equity and Inclusion (DEI) at MIT.

1 International Energy Agency (IEA) 2US Environmental Protection Agency (EPA)

Our Solution

Swappable Hydrogen Tank

Electric Motor and Traction Inverter

Provides the **peak torque** of a typical EV and hydrogen gas acts as a range extender.

Energy Storage System

Hydrogen Fuel Cell

Fuel Cell converts hydrogen to **electric energy** and water.

Energy Management System

Manages **energy flow** from **Fuel Cell** to **Energy Storage System**.

History

2005

The MIT EVT was founded in 2005 as a team dedicated to the research, design, and operation of electric vehicles.

‘06-’08

Successful conversion of a Porsche 914 to BEV with range of 100 miles and 0-60 time of under 18 seconds.

‘09-’11

Conversion of a Ford CD3 platform to a BEV. Vehicle had fast-charging in <11 minutes, 0-60 time <9s, and a range of 200 miles.

‘11

Raced our eSuperbike in the Isle of Man Zero TT, reaching speeds of over 100mph, coming in third place overall.

‘16

The KOMMIT team takes second place in the Pikes Peak International Hill-Climb event with our eMoto bike.

Additional Notable Achievements

(‘13-’14) MIT EVT built a electric bicycle with battery trailer that drove from BOS to NYC in a single charge.

Current Work

The Version 1 hydrogen motorcycle is an open-source, functional prototype of hydrogen as a fuel for mobility applications.

Our team has completed the conversion of a Ducati 900ss to a fuel-cell electric vehicle. The platform was designed to be modular, and serve as a platform for research and education.

We've completed our first track test, and are currently working on full-system characterization and energy management. The data from range and performance testing here will inform our design for future, optimized versions of the bike.

80mph Top Speed

80km Est. Range

<2s 0-60 Time

The Version 2 bike will be an optimized, fully race-capable vehicle designed to demonstrate hydrogen's ability to serve as an alternative to gasoline.

Looking to the future, after our team completes the characterization of our proof of concept, we want to push hydrogen to the limits. We are determined to build a hydrogen fuel cell motorcycle that beats a gasoline motorcycle in terms of performance and range.

Our goal is to showcase hydrogen's potential as a fuel for mobility and motorsport as a viable alternative to gasoline, and to get the public excited about hydrogen as an energy source.

140mph Target Top Speed

250km Target Range

<2s 0-60 Time

Why Choose EVT?

Our partners make our work possible.

“When you choose to support our team, you choose to support a group of individuals that have dedicated their careers and lives to finding solutions that can help us achieve Net-Zero Emission by 2050 according to the IEA plan. Our team has a unique environment built on collaboration, trust, and the idea that good ideas can come from anywhere. We believe in the same, open-source research initiatives that allow the work we do to have maximum impact. We focus on making our work practical and functional in the real world, and above all-else we commit ourselves to the highest standards and rigor of scientific research.” — Aditya (Adi) Mehrotra, Project Lead

Global Exposure through International Events

HYDROGEN AMERICAS 2023 SUMMIT & EXHIBITION

CES

MIT ENERGY CONFERENCE

WORLD HYDROGEN 2024 SUMMIT & EXHIBITION

Unlike traditional student engineering teams, we don’t focus on a single race or event. Rather, we attend conferences and events around the world which provides us the opportunity to engage with experts in industry and academia and allows for global exposure for our partners.

At all of these events, we offer promotion for our partners in different forms depending on their financial commitments. Detailed benefits for partners are outlined in the following sections.

Sponsor Perks

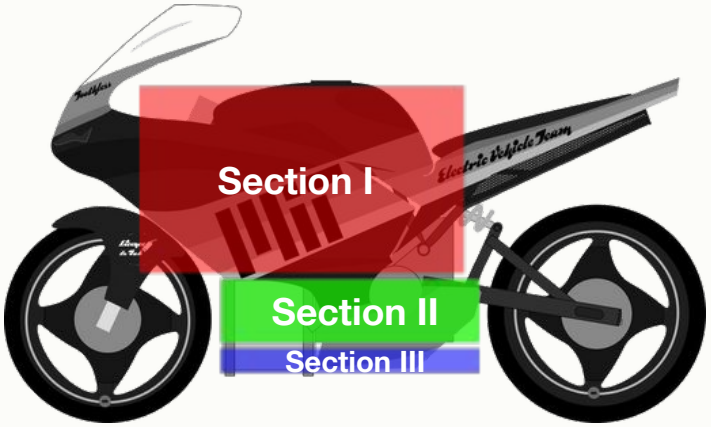
Please note all donations under $2,500 (though greatly appreciated) will be considered “gifts” under MIT policy, so we are unable to provide any benefits.

Partnership Level	WATT $2500+	KILO-WATT $5000+	MEGA-WATT $10,000+	GIGA-WATT $20,000+
Acknowledgement on Website	✓	✓	✓	✓
Logo on Website/Team Apparel	✓ (Small)	✓ (Medium)	✓ (Large)	✓ (Feature)
Feature on Social Media		✓	✓	✓
Shop Tour		✓	✓	✓
Resume Book		✓	✓	✓
Logo on Vehicle		✓ (Section III)	✓ (Section II)	✓ (Section I)
Hosting Recruiting Events			✓	✓

Please note that our team also graciously accepts in-kind donations. Partnership level is determined by the value of the in-kind donation where proof of donation value is required and must be approved through MIT.

If you wish to contribute to MIT EVT, we accept donations through Giving @ MIT (QR code), or check.

evt.mit.edu/partners



Fuel Cell Partner (1 Per Vehicle)

At the core of each of our projects is a hydrogen fuel-cell system that is often not manufactured in-house by our team. We partner with fuel-cell manufacturers around the world to demonstrate their technology in our platform. Contact us to learn more, or become a fuel-cell partner.

Logistics Partner (1 Per Event)

Our team has a commitment to sharing our knowledge through international events. Our logistics partners support us in these endeavors by enabling our team and our equipment to travel to events around the globe. Contact us to learn more, or become a logistics partner.

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We hope you'll join us.

If you have any questions or would like to discuss further, please contact us at

L2F@mit.edu


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ACTIN UP


clean hydrogen racing