

INOCEL Advanced Technology Unveils Game-Changing Hydrogen Fuel Cell Technology for High-Performance ePowertrains

In a groundbreaking session during EPARTRADE's weekly *Race Industry Now* webinar series, INOCEL Advanced Technology showcased how its latest hydrogen fuel cell innovations are poised to revolutionize the performance and range of electric powertrains — especially in motorsports and other high-demand applications.

The session, hosted by Brad Gillie of SiriusXM, featured INOCEL's CEO, Pierre Lion, and Co-CEO, Charles Boulanger, who detailed the company's mission to make hydrogen fuel cells a viable, sustainable, and high-performing alternative to traditional propulsion systems.

Fuel Cell Tech Tailored for High Performance

"This is not just about going green," said Boulanger. "We are addressing the real-world needs of performance-based industries. Motorsports, heavy-duty applications, and even aerospace sectors require energy solutions that deliver both endurance and power. Our hydrogen fuel cell stack is engineered to deliver just that."

Unlike legacy fuel cell systems designed primarily for low-load, long-duration use (such as public transportation), INOCEL's system has been purpose-built for rapid acceleration, sustained high loads, and the thermal management necessary in extreme racing environments.

Key Advantages Over Battery-Electric and ICE Systems

Pierre Lion outlined the major technical comparisons between hydrogen fuel cell systems, battery-electric powertrains, and internal combustion engines (ICE):

- **Refueling Speed:** Comparable to gasoline, hydrogen can be refueled in minutes versus hours-long battery charging.
- **Energy Density:** Hydrogen offers significantly higher gravimetric energy density, reducing vehicle weight and enhancing handling.
- **Thermal Efficiency:** Fuel cells maintain performance over a wider temperature range, with optimized cooling systems designed for track-level demands.

"Energy autonomy and thermal management are key challenges in motorsports," said Lion. "We believe hydrogen fuel cells offer a solution that is not just cleaner — but superior."

Modular, Scalable, and Race-Ready

One of INOCEL's most compelling offerings is its modular stack architecture. The system is designed to scale across multiple vehicle platforms, from endurance race cars to commercial transport and stationary energy systems.

The compact design, lightweight construction, and high power-to-weight ratio make it particularly attractive for integration into electric racing vehicles. The presenters also hinted at upcoming motorsports programs where the tech will debut on track.

Driving Toward a Cleaner, Competitive Future

“The racing world thrives on innovation,” added Boulanger. “By proving what’s possible with hydrogen in motorsports, we can accelerate broader adoption — just like ABS, active suspension, and other race-born technologies have done in the past.”

Hosted as part of EPARTRADE's 535th weekly technical webinar, the session attracted global interest from engineers, team managers, and OEM representatives eager to understand how hydrogen can reshape the future of performance mobility.

For more information, [click here to watch the full webinar](#).