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Destination IAA: Cummins unveils new technology for zero-emissions power solutions

Its fourth-generation hydrogen fuel cell engine, LFP battery pack and newly acquired Meritor ePowertrain technologies are making their debut

COLUMBUS, Ind.--(BUSINESS WIRE)-- Cummins Inc. (NYSE: CMI) is showcasing its platform of zero-emissions technologies this week at the IAA Transportation show, the world's largest mobility show, in Hannover, Germany. A range of new Cummins technologies and the recently acquired Meritor ePowertrain technologies are available publicly together for the first time. With over a century of experience as a global power leader, Cummins is solidifying its commitment to providing comprehensive zero-emissions technology on a global scale.

"Cummins has deep application expertise, and we are uniquely positioned to deliver solutions that truly fit the needs of commercial applications," said Amy Davis, Vice President and President of New Power at Cummins. "Realizing a net-zero future will require a range of technologies. Our extensive zero-emissions portfolio is how we will meet varied customer demands across the hardest-to-abate industries and make the energy transition possible."

One key zero-emissions product Cummins revealed at IAA is its fourth-generation hydrogen fuel cell engine. Designed to meet the duty-cycle, performance and packaging requirements of medium- and heavy-duty trucks and buses, the fuel cell technology is available in 135 kW single and 270 kW dual modules.

Scania in Europe and Daimler Trucks North America have each announced collaborations with Cummins to develop and integrate these next-generation fuel cell engines into demonstrator vehicles. The systems use fourth-generation variable pressure technology to provide higher power density, power nodes and operating temperatures for easier system integration into vehicles. They also have strong operating cycle efficiency and durability for a lower total cost of ownership.

"We know our customers have diverse needs and complicated duty cycles to support, which is why we focus on continued innovation and improvement," said Amy Adams, Vice President of Fuel Cell and Hydrogen Technologies at Cummins. "We're developing

hydrogen fuel cell technology that demonstrates the capacity and flexibility required to meet or exceed the power needs for on-highway commercial vehicles – proving hydrogen as a viable solution to decarbonize the economy.”

Attendees at IAA will also get the first glimpse of a drivetrain assembled with a newly introduced Cummins lithium iron phosphate (LFP) battery pack, Meritor’s 17xe ePowertrain and Meritor’s Power Control and Accessory System (PCAS). Cummins recently added the ePowertrain and PCAS solutions to its portfolio through its acquisition of Meritor. The ePowertrain leverages market-leading technologies in the axle, motor and inverter, delivering performance, efficiency and packaging advantages at a competitive cost. Additionally, the PCAS provides power where needed and control of necessary sub-systems while reducing packaging size and simplifying integration.

Cummins is adding an LFP battery to its line of lithium-ion battery products to expand support of electrified commercial vehicle applications. The LFP solution gives customers access to faster charging and longer-life batteries, targeting the medium-duty truck and school bus markets. By using a multi-chemistry strategy, Cummins is positioned to expand its manufacturing capacity further and diversify its supply chain, providing customers with more cost-effective electrification solutions.

"We are giving customers options to enable them to adapt to a zero-emissions future faster," said Brian Wilson, General Manager of Electrified Components at Cummins. "With the recent acquisition of Meritor and our new multi-chemistry approach, we will be able to tailor our solutions and offer a one-stop-shop for customers' powertrain needs."

Cummins' portfolio includes four batteries, each of which targets a different duty cycle and use case and complement each other. In addition to the LFP option, this includes three nickel manganese cobalt (NMC) batteries – the BP95E, BP74E and BP30E. The BP95E is Cummins' next-generation solution that prioritizes greater energy density in applications for customers who need more weight-sensitive solutions or have longer ranges. The BP30E is ideal for meeting limited-space applications and rugged demands, and the BP74E is the foundation for Cummins' BEV innovation and progress.

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About Cummins Inc.

Cummins Inc., a global power leader, is a corporation of complementary business segments that design, manufacture, distribute and service a broad portfolio of power solutions. The company's products range from diesel, natural gas, electric and hybrid powertrains, and powertrain-related components including filtration, aftertreatment, turbochargers, fuel systems, controls systems, air handling systems, automated transmissions, electric power generation systems, batteries, electrified power systems, hydrogen generation and fuel cell products. Headquartered in Columbus, Indiana (U.S.), since its founding in 1919, Cummins employs approximately 59,900 people committed to powering a more prosperous world through three global corporate responsibility priorities critical to healthy communities: education, environment, and equality of opportunity. Cummins serves its customers online, through a network of company-owned and independent distributor locations, and through thousands of dealer locations worldwide and earned about \$2.1 billion on sales of \$24.0 billion in 2021. See how Cummins is powering a world that is always on by accessing news

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