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Air Products and Cummins to Accelerate Development and Deployment of Hydrogen Fuel Cell Trucks

Transition of Tractor Fleet to Zero Emission Vehicles Begins at Air Products

LEHIGH VALLEY, Pa. & COLUMBUS, Ind.--(BUSINESS WIRE)-- Air Products (NYSE:[APD](#)), a world leader in the supply and transport of hydrogen, and Cummins Inc., a global power and hydrogen technologies leader, jointly announce the signing of a memorandum of understanding (MOU) to work together to accelerate the integration of hydrogen fuel cell trucks in the Americas, Europe and Asia. Cummins will provide hydrogen fuel cell electric powertrains integrated into selected OEM partners' heavy-duty trucks for Air Products, as Air Products begins the process of converting its global fleet of distribution vehicles to hydrogen fuel cell vehicles.

Following a successful demonstration and pilot phase, Air Products plans to convert its global fleet of approximately 2,000 trucks to hydrogen fuel cell zero-emission vehicles. Cummins and Air Products expect the demonstration phase to begin in 2022. Additionally, Cummins and Air Products will work together to increase the accessibility of renewable hydrogen, including hydrogen infrastructure opportunities that promote the adoption of hydrogen for mobility.

"We believe hydrogen is the future for heavy duty segments of the transportation market and we can demonstrate to the world its merits by being a first-mover in transitioning our heavy-duty fleet of trucks to hydrogen fuel cell electric vehicles. We are pleased to be working with Cummins to achieve our fleet transition goals. Sustainability is Air Products' growth strategy and creates our growth opportunities, and nothing says more about our company's approach to sustainability than a fleet of zero-emission vehicles on the road delivering product to customers every day," said [Seifi Ghasemi](#), Air Products' chairman, president and chief executive officer.

"This is another turning point for hydrogen and the energy transition," said Tom Linebarger, chairman and chief executive officer at Cummins. "As we develop the technologies of tomorrow, we need the partnership of others to be successful, and this partnership with Air Products is the next step in leading the industry on the path to a zero-emissions future."

“The best way to promote the adoption of hydrogen for mobility in heavy-duty applications is for us to have units on the road and lead by example. In addition to other heavy-duty applications like transit fleets, where we already provide fueling solutions, the semi-truck market is a major opportunity for hydrogen due to its rigorous requirements. Only hydrogen fuel cell vehicles can provide the necessary range, refueling time, and weight requirements to decarbonize this important transportation sector,” said [Eric Guter](#), Air Products’ vice president for hydrogen for mobility solutions.

“We are thrilled to work with Air Products to take this important step towards transitioning thousands of their trucks to zero-emissions, hydrogen fuel cell electric vehicles,” said Amy Davis, vice president and president of New Power at Cummins. “Together with Air Products, we will combine our vast expertise in hydrogen—from production to consumption—with the on-road learnings we already have through our Cummins-powered zero-emissions fleet. From the hundreds of battery electric buses and trucks to fuel cell systems for bus and rail, working with these innovative fleets creates the tipping point necessary for us to scale and accelerate a carbon-neutral world.”

Hydrogen is an important technology option for sustainable transportation, including for heavy-duty vehicles. Hydrogen fuel cells are gaining momentum as the technology of choice in heavy-duty applications due to the duty cycles, especially in extreme climate conditions. Hydrogen as a transportation fuel most closely mirrors the traditional consumer transportation fuel experience, and Air Products has been a pioneer in this area for decades. The company’s technologies are used in over 1.5 million refuelings annually across 20 countries, with Air Products having been involved in over 250 projects.

As the world’s largest hydrogen producer, Air Products has experience across the full value chain for hydrogen and is driving sustainable growth by building, owning and operating the world’s largest production, gasification, carbon capture, transportation and fueling projects. With over 60 years of global hydrogen experience operating in over 50 countries, Air Products has the proven capability and know-how to make hydrogen through all available production methods and to distribute this increasingly important emission-free fuel safely, reliably, and economically.

Cummins has a long history of advanced technology and engineering capabilities and has a broad portfolio of market-leading hydrogen technologies, including PEM electrolyzer and fuel cell solutions. To date, the company has deployed more than 2,000 fuel cells and 600 electrolyzers globally. Cummins hydrogen innovations have been part of many of the world’s “firsts,” including powering the world’s first hydrogen fuel cell passenger trains, the world’s first hydrogen refueling station suitable for ships, cars and trucks in Antwerp, Belgium and the world’s largest PEM electrolyzer in Bécancour, Canada.

About Air Products

Air Products (NYSE:[APD](#)) is a world-leading industrial gases company in operation for 80 years. Focused on serving energy, environment and emerging markets, the Company provides essential industrial gases, related equipment and applications expertise to customers in dozens of industries, including refining, chemical, metals, electronics, manufacturing, and food and beverage. Air Products is also the global leader in the supply of liquefied natural gas process technology and equipment. The Company develops, engineers, builds, owns and operates some of the world's largest industrial gas projects,

including: gasification projects that sustainably convert abundant natural resources into syngas for the production of high-value power, fuels and chemicals; carbon capture projects; and world-scale carbon-free hydrogen projects supporting global transportation and the energy transition.

The Company had fiscal 2020 sales of \$8.9 billion from operations in 50 countries and has a current market capitalization of nearly \$65 billion. More than 19,000 passionate, talented and committed employees from diverse backgrounds are driven by Air Products' higher purpose to create innovative solutions that benefit the environment, enhance sustainability and address the challenges facing customers, communities, and the world. For more information, visit airproducts.com or follow us on [LinkedIn](#) [Twitter](#), [Facebook](#) or [Instagram](#).

Cautionary Note Regarding Forward-Looking Statements: This release contains "forward-looking statements" within the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on management's expectations and assumptions as of the date of this release and are not guarantees of future performance. While forward-looking statements are made in good faith and based on assumptions, expectations and projections that management believes are reasonable based on currently available information, actual performance and financial results may differ materially from projections and estimates expressed in the forward-looking statements because of many factors, including risk factors described in our Annual Report on Form 10-K for the fiscal year ended September 30, 2020. Except as required by law, we disclaim any obligation or undertaking to update or revise any forward-looking statements contained herein to reflect any change in the assumptions, beliefs or expectations or any change in events, conditions or circumstances upon which any such forward-looking statements are based.

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 57,800 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 \$1.8 billion on sales of \$19.8 billion in 2020. Learn more at cummins.com.

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