

Cummins Unveils Next Generation of Energy-Diverse Products and Technology Solutions

Cummins features latest clean-diesel, near-zero natural gas and electric power solutions

COLUMBUS, Ind.--(BUSINESS WIRE)-- During an event at its historic technical center in Columbus, Ind., Cummins Inc. (NYSE: CMI) today unveiled its latest power solutions and energy-diverse products, demonstrating that the company is prepared to win with new and future technologies.

This Smart News Release features multimedia. View the full release here: http://www.businesswire.com/news/home/20170829006122/en/



Aeos 1 - first fully electric heavy-duty truck and powertrain (Photo: Business Wire)

The company displayed the latest in near-zero natural gas engine technology, super-efficient diesel engines (the X12 and X15), and shared plans to introduce a revolutionary heavyduty diesel engine in 2022. To round out the company's expert capabilities in powertrain design, Cummins also revealed, for the first time ever, a fully electric class 7 demonstration Urban Hauler Tractor.

These products and

technologies add to

Cummins' unmatched portfolio of solutions and offer customers the latest in environmentally-friendly, cost-effective and powerful products to help them succeed in every market and every application.

With these new innovations, Cummins will continue to provide connected customer support, including cloud-based solutions and big data analysis, in order to maximize up-time, safety and business optimization, increasing customers' bottom line.

"These new technological innovations build on our 100-year legacy of bringing the best solutions to our customers, driving their success and meeting the evolving demands of their industries and markets," said Jennifer Rumsey, Chief Technical Officer, Cummins Inc. "We will harness our global technical footprint to continue to develop a wide variety of power technologies to bring our customers the choice and solutions that enable their success and contribute to a sustainable future."

During the event, which included tours of the Cummins technical center, Cummins leaders and scientists showcased the company's continued innovation and work in analysis-led design capability, virtual reality, alternative fuels and digital capabilities, all of which are positioning the company to win in current and future technologies and in new markets.

"As a global power leader for the commercial and industrial customers we serve, with an unmatched service and support network, we are better positioned than any other company to win in new and emerging technologies and in new markets," said Rich Freeland, Cummins President and Chief Operating Officer. "We will leverage our deep industry and customer knowledge and our scale advantage to win. Over the past century, our ability to innovate and adapt has fueled our success and we are confident we are on the right path to do it again."

Cummins leadership believes that energy diversity is critical to its future success. These are some of the technologies the company is offering or developing:

Clean Diesel

Cummins continues to be the leader in clean-diesel technology and understands that for many markets diesel engines will be best solution for decades to come. The latest products are highly efficient and sustainable heavy-duty diesel engines, showcasing the company's innovation in traditional diesel power, the most commonly used power on the road today. The powerful **X15** and lightweight **X12** engines are engineered for optimal performance and power while offering class-leading fuel economy through the use of advanced air handling and fuel system controls. Both engines utilize the compact Single Module Aftertreatment, which offers longer maintenance intervals for the lowest cost of ownership. Cummins' work in diesel innovation doesn't end there – the next heavy-duty engine for 2022 affirms the company's commitment to providing the most effective power solution for Class 8 linehaul trucks. And, with the recent formation of the Eaton Cummins Automated Transmission Technologies, customers can count on Cummins to provide market-leading innovation for integrated powertrain technologies.

Alternative Fuels and Power Solutions

Cummins has invested in research and development projects to develop products and

technology solutions utilizing a wide range of fuels. The company is developing a high-efficiency spark-ignited technology that can deliver diesel-like performance and durability across a range of liquid fuels, like ethanol, methanol, and gasoline - meeting the most stringent emissions requirements. Cummins continues to investigate the viability of alternatives like bio-fuels, synthetic fuels and hydrogen. And, Cummins has also invested in exploratory projects focused on Proton Exchange Membrane and Solid Oxide Fuel Cell technologies.

Natural Gas

Cummins has long been a leader in providing natural gas engines as one of its sustainable, affordable and readily-available power options. The company revealed its latest **Near-Zero natural gas engines** during the event. End-users will find the Cummins Near-Zero natural gas engines are an equivalent performance option to diesel and like the latest clean-diesel have little to no emissions for customers looking to minimize emissions footprint. Working toward a class 8 integration, these engines offer adaptability with Agility's Blue-IQ fuel delivery technology for full connectivity.

Electrified Powertrain Solutions

With the unveiling of the **Concept Class 7 Urban Hauler EV**, Cummins introduced a state-of-the art battery pack offering, redefining energy-efficiency and density capabilities for the EV market. The lighter, denser battery design allows it to hold a longer charge for improved range and faster charging, reducing down time. The concept truck design includes an Engine-Generator option for extended range capabilities, allowing users to benefit from Cummins B4.5 or B6.7 engines, providing a major advantage over today's hybrid systems. These engine options offer 50 percent fuel savings compared to today's diesel hybrids with zero emissions.

Digital Capabilities, Data & Analytics

Customers are looking for convenient and responsive interactions, real-time updates, and information that make products safer, more productive, and easier to use. Cummins has offered telematics systems in some markets for many years, but the potential for digital goes far beyond telematics systems and at a faster pace. Recognizing this, in May 2017, Cummins formed a new internal organization led by Sherry Aaholm, Cummins Chief Information Officer, called the Digital Accelerator. This new organization seeks to streamline innovation, bringing concepts from the idea stage to commercialization at the most efficient and effective pace.

For more information, visit <u>www.social.cummins.com</u>.

About Cummins Inc.

Cummins Inc., a global power leader, is a corporation of complementary business units that design, manufacture, distribute and service diesel and natural gas engines and related technologies, including fuel systems, controls, air handling, filtration, emission solutions and electrical power generation systems. Headquartered in Columbus, Indiana, (USA) Cummins currently employs approximately 55,400 people worldwide and serves customers in approximately 190 countries and territories through a network of approximately 600

company-owned and independent distributor locations and approximately 7,400 dealer locations. Cummins earned \$1.39 billion on sales of \$17.5 billion in 2016. Press releases can be found on the Web at www.cummins.com. Follow Cummins on Twitter at www.twitter.com/cummins and on YouTube at www.youtube.com/cumminsinc.

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Source: Cummins Inc.