

Achates Power Receives Department of Energy Award to Develop Next Generation Medium-Duty Commercial Vehicle Engine

Recent award enables prototype demonstration and concept design

SAN DIEGO, March 18, 2021 - Achates Power has announced that it was awarded a \$5 million cooperative agreement from the U.S. Department of Energy in 2020 for a new two-cylinder prototype demonstration, and concept design of a next generation medium-duty commercial vehicle opposed-piston engine.

The award is part of the DOE's sustainable transportation initiatives which focus on improving the energy efficiency, convenience and affordability of transporting people and goods in a clean and sustainable manner. This new project will create and test designs that increase fuel efficiency and minimize the criteria emissions from class 3-6 opposed-piston engines with a particular emphasis on two- and four-cylinder opposed-piston engine variants. Design and calibration improvements will use a common power cylinder configuration across several different engine variants in order to enable a cost-effective broad range of power and torque capability for an efficient family of engines.

"We've demonstrated the ability for a commercial vehicle engine to operate with near zero criteria emissions while also emitting substantially lower CO₂ than best-in-class conventional engines, all in a practical and cost-effective manner," said David Crompton, president and CEO, Achates Power. "In order to fully maximize the utility of the opposed-piston in the commercial vehicle industry we need to offer a broad range of power and torque capabilities. Working with the world-class teams at Clemson, Wisconsin, and Isuzu, the project helps lead us towards more sustainable transportation."

Achates Power will work with Isuzu Technical Center of America (ITCA), Clemson University and the University of Wisconsin-Madison as project members. Clemson will undertake engine simulation, open-cycle computational fluid dynamics (CFD) simulation and analysis, and model-based calibration, and will test a two-cylinder opposed-piston engine. The University of Wisconsin will contribute closed-cycle CFD to optimize clean, efficient combustion. ITCA will provide vehicle and engine requirements and benchmark information.

In December 2020, Achates Power announced that their 10.6L heavy-duty commercial vehicle project, funded by the California Air Resources Board, had achieved both the ULNO_x and CO₂ reduction milestones, and that vehicle integration was proceeding. Demonstration vehicles will be on the road in 2021 in a commercial fleet application. For more information on this project, please see the recent release: <https://achatespower.com/wp-content/uploads/2021/01/OP-Engine-Achieves-Significant-Emissions-Milestone-for-Commercial-Vehicles.pdf>

About Achates Power, Inc.

The Achates Power Opposed-Piston Engine is engineered to meet future emissions and fuel economy standards more cost effectively than any other engine solution. Founded in 2004 with the mission to build cleaner, more efficient engines, Achates Power has an experienced staff of engineers and scientists working with leading engine manufacturers to bring the OP Engine to market. Achates Power is backed by the Oil and Gas Climate Investments and other investors. For more information visit www.achatespower.com.

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