

PRESS RELEASE

11 September 2020

Joint project funded by ARPA-E is first initiative for new Ricardo-Achates partnership

The newly-formed partnership between Ricardo and Achates Power Inc. (API) of San Diego, Calif., has already received its first assignment – an Advanced Research Projects Agency-Energy (ARPA-E) grant to improve overall efficiency and reduce emissions in full-size pick-up trucks

Ricardo North America added to its powertrain design/development capabilities in June when it partnered with API and expanded its Southern California team. The agreement allowed API, which has been engaged with ARPA-E for several years, to tap into Ricardo's powertrain know-how to support the continuation of its advanced engine developments with ARPA-E and create a clear path toward production applications.

ARPA-E, under the auspices of the U.S. Department of Energy, advances highpotential, high-impact energy technologies and awardees are unique because they are developing entirely new ways to generate, store and use energy. The grant serves as a bridge between the private sector and the government for advancing technologies that improve the U.S. positions in energy sustainability and climate change. "Reduced weight, higher energy efficiency and lower emissions. That is the formula needed for the internal combustion engines of the future, and there is no application where the formula is more applicable or relevant than the U.S. light duty (pick-up) truck market," says Ricardo president Marques McCammon, who directs Ricardo's transport businesses in Detroit, Silicon Valley and San Diego. "Ricardo is investing in people, aligning with the best and brightest companies and tackling projects that bring new technologies to transportation. We aim to prove the validity of these cleaner technologies for the North American market so the potential of the research can manifest into reality on American roads."

RICARDO

The new Gen II program builds upon the successful API Gen I opposed piston engine with a focus on efficiency, weight, emissions and power. The 3-cylinder engine will be comprised of a Gasoline Compression Ignition (GCI) combustion system, a novel boosting system, 48V electrification and advanced manufacturing techniques to minimize engine weight.

"The ARPA-E grant is designed to solve hard problems," says API chief technical officer Fabien Redon. "With Ricardo's world-class design expertise, we will incorporate diesel-like combustion into a gasoline engine while adding the efficiency of an opposed piston design. The ground-breaking result will be a highly efficient gasoline engine with diesel-like levels of performance that can be cost-effective to deploy at scale."

Ends



NOTES TO EDITORS:

Ricardo plc is a global, world-class, multi-industry consultancy for engineering, technology, project innovation and strategy. Our people are committed to providing outstanding value through quality engineering solutions focused on high efficiency, low emission, class-leading product innovation and robust strategic implementation. With a century of delivering excellence and value through technology, our client list includes the world's major transportation original equipment manufacturers, supply chain organizations, energy companies, financial institutions and governments. Guided by our corporate values of respect, integrity, creativity & innovation and passion, we enable our customers to achieve sustainable growth and commercial success. Ricardo is listed in the FTSE4Good Index, which identifies global companies that demonstrate strong environmental, social and governance (ESG) practices. Ricardo, Inc. is the US subsidiary of Ricardo plc. For more information, visit <u>www.ricardo.com</u>.

Media contacts:

Ricardo Inc

Jeff Green VMA Communications Tel: +1 (310) 291-1977 E-mail: jeff.green@vmapr.com

Ricardo plc

Anthony Smith Ricardo Media Office Tel: +44 (0)1273 382710 E-mail: <u>media@ricardo.com</u>