

## ***Transient Plasma Systems Successfully Completes Multi-Cylinder Engine Testing with Nanosecond Pulsed Plasma Ignition Technology***

*TORRANCE, Calif., August 20, 2019* — [Transient Plasma Systems Inc.](http://transientplasma.com) (TPS), which develops nanosecond pulsed plasma ignition systems to improve fuel efficiency and reduce *greenhouse* gas emissions, has achieved a new milestone in internal combustion engine testing.

The new TPS test marks the first multi-cylinder demonstration of the company's [nanosecond pulsed plasma ignition technology](#) in a mass-manufactured, on-road natural-gas engine. TPS tested its Transient Plasma Ignition System in multi-cylinder operation on a [Cummins Westport ISX12N natural-gas engine](#).

"The successful multi-cylinder testing of nanosecond pulsed plasma ignition technology gets us one step closer to widespread market demand and adoption. We are very grateful to the California Energy Commission (CEC) for providing the grant, to Cummins Westport for providing the engine and engine support, and to SoCal Gas for providing additional funding for this effort," said Dan Singleton, co-founder and CEO of Transient Plasma Systems.

The tests were conducted at the U.S. Department of Energy's [Argonne National Laboratory](#) in Illinois, under a grant by the [CEC](#) with support from [SoCalGas](#) and [Cummins Westport](#).

"This is a major milestone in the development of our nanosecond pulsed plasma ignition technology," said Jason Sanders, co-founder and chief scientist at Transient Plasma Systems. "Our ignition technology reduces fuel consumption in combustion engines by a significant amount, and it can do so with an easy-to-implement solution that requires no engine redesigns."

The testing demonstrated stable operation of the Transient Plasma Ignition System under on-road conditions, including improved brake thermal efficiency, reduced CO and NOx emissions, and extension of exhaust gas recirculation (EGR) dilution tolerance.

### **About the TPS Transient Plasma Ignition System**

For engine and auto manufacturers, the TPS Transient Plasma Ignition System is a cost-effective and widely validated new tool for high-dilute combustion strategies, reduced NOx emissions, and efficient engine modes in challenging situations. The low-energy/high-power ignition system increases efficiency in a variety of combustion engine designs, including gasoline-powered, hybrid, and natural-gas-powered vehicles. Unlike competing systems that involve costly engine redesigns and displacement of current engine architecture, the TPS Transient Plasma Ignition System works alongside existing engine designs and efficiency techniques such as exhaust gas recirculation (EGR), gasoline direct injection (GDI), turbocharging and e-boost, significantly enhancing performance with a simple solution. To learn more, please visit [www.tpsignition.com](http://www.tpsignition.com).

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### **About Transient Plasma Systems, Inc. (TPS)**

*Transient Plasma Systems (TPS) designs and manufactures nanosecond pulsed power systems that enable commercial, industrial and research applications across a broad range of areas, including combustion, emissions remediation, surface treatments, medical devices, and agriculture. The foundational technology was developed at the University of Southern California (USC), with over a decade of support from the Department of Defense. The company was spun out of USC with the express purpose of translating the technology into products and systems to address demands in both military and commercial markets. To learn more, please visit [www.transientplasmasytems.com](http://www.transientplasmasytems.com).*