



ClearFlame Engine Technologies Awarded \$1.1 Million Department of Energy Phase II Grant

Funding will support R&D for clean engine technology on heavy-duty engines

Geneva, IL, August 20, 2020 – ClearFlame Engine Technologies, a start-up company dedicated to the development of clean engine technology, has been awarded a two-year, \$1.1 million Phase II grant from the Department of Energy's (DOE) Small Business Innovation Research (SBIR) program. The funding will support the company's continued research and development work for its breakthrough clean engine technology for the heavy-duty truck, off-highway and industrial markets.

"The results we achieved in Phase I of the DOE SBIR program successfully demonstrated the methodology and experimental process for optimizing a diesel-style engine to be more efficient using decarbonized liquid fuels," said Dr. Julie Blumreiter, chief technology officer and co-founder of ClearFlame. "During Phase II, we'll focus on additional validation through our collaboration with Argonne National Laboratory and the University of Illinois Urbana-Champaign, helping us showcase the efficiency and sustainability of our solution on a large commercial engine platform and reaching the technical milestones required for commercialization."

ClearFlame has developed a unique engine technology that enables low-carbon and carbon-negative fuels to be easily integrated into existing diesel engine platforms, offering a more sustainable and cost-effective solution than diesel fuel. It provides the same performance, fuel efficiency and rugged practicality associated with diesel engines, while eliminating the need for complex aftertreatment solutions.

By replacing 100 percent of the petroleum fuel used with decarbonized fuels such as ethanol, ClearFlame's engine technology significantly reduces greenhouse gas emissions, particulate matter and smog, helping to meet stringent global emissions regulations while reducing overall engine cost.

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Press Release

"This DOE grant represents an important step forward in helping us to continue the development work critical to enabling future commercialization of our technology," said Dr. BJ Johnson, CEO and co-founder of ClearFlame. "As emissions regulations continue to evolve, engine manufacturers need solutions *today* that are easy to implement, cost-effective and most importantly, have a positive impact on climate change. We believe ClearFlame's engine technology can help accelerate that path to cleaner heavy-duty diesel engines."

Phase II research is also being conducted at the company's new engineering center in Geneva, Illinois and with Analytical Engineering Inc., a collaborative partner for research and development.

ClearFlame has previously received over \$2 million in non-dilutive grant funding from the National Science Foundation, the Department of Energy, Argonne National Laboratory, the Department of Agriculture, the Midwest Energy Research Consortium and Stanford University.

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About ClearFlame Engine Technologies

At <u>ClearFlame Engine Technologies</u>, we're breaking the bond between the diesel engine and diesel fuel, accelerating the path to true emissions reduction for the heavy-duty and off-highway markets. Our technology meets global emissions regulations using climate-friendly fuels available throughout the world. Our technology lowers costs by negating the need for complex aftertreatment technologies without compromising the practicality or performance of traditional diesel engines. For more information, visit <u>www.clearflameengines.com</u>.

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