



SCIENTIFIC AVIATION

News Release

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Major Energy Companies Join Forces to Battle Methane Emissions, Launching Project Falcon

BOULDER, CO - Scientific Aviation today announced the launch of Project Falcon, a 6-month joint industry partner study that aims to determine the best way to deploy continuous methane monitoring technology that will allow energy companies to find, detect, and repair methane leaks faster.

Chevron, ConocoPhillips, Devon Energy, ExxonMobil, Pioneer Natural Resources, Shell and TRP Energy will test Scientific Aviation's [SOOFIE](#) (Systematic Observations of Facility Intermittent Emissions) system, an affordable ground-based technology that measures methane emissions 24 hours a day, in real-world environments, and immediately alerts operators about issues. The tests will be conducted in Colorado, New Mexico and Texas starting in March 2021. The data and results will be made available to the industry, regulators and the public through publication in a peer-reviewed journal.

"As the scientific community, the United Nations, and countless others have issued dire warnings about the impact of greenhouse gases on earth's environment, the fight to combat this problem will take energy and technology companies working together to accelerate change," said Dr. Stephen Conley, president of Scientific Aviation. "These companies have determined that doing all they can to protect the environment requires collaboration. We are excited to see how much can be done when the energy industry joins together to tackle a problem as important as protecting the environment."

The foundation of Project Falcon is Scientific Aviation's [SOOFIE](#) system: a self-contained leak detection system in which each sensor contains its own solar panel, battery, cellular or WiFi connectivity, and the ability to take five methane measurements per second. SOOFIE also captures atmospheric conditions that are essential to the calculation of actual emission rates, rather than measuring concentration levels which can be susceptible to producing many false alarms. SOOFIE is also able to measure other gases, such as H₂S, NO and NO₂.

"Methane emissions detection and reduction should be a shared goal that industry works proactively and collaboratively to achieve, which is why we are proud to support efforts like Project Falcon" said Vanessa Ryan, manager of carbon reduction. "At Chevron we believe the future of energy is lower carbon, and we are actively addressing the reduction of methane emissions by using data, technology and innovation to prioritize the most efficient detection and reduction strategies."

ConocoPhillips has long been committed to reducing emissions from its facilities, including the development of new technologies designed to better detect where the sources of these emissions are and allowing them to prioritize their resources to address larger leaks faster. "To battle fugitive methane emissions from our facilities more effectively, we knew we had to employ the latest technologies and use

the best tools available to us” said Khalid Soofi, Geoscience Fellow at ConocoPhillips. “We needed a way to reliably monitor our facilities more effectively, including facilities that aren’t regularly staffed and are often very remote.”

Mike Smith, EHS Advisor for Devon Energy, said “At Devon, we continuously search for innovative ways to help us further reduce our emissions footprint. This program is another way not only to help us more precisely understand, measure, and quantify our emissions, but also to enhance our capacity to rapidly identify and reduce leaks. We are excited to participate in this important initiative that we think will benefit the broader energy industry.”

“ExxonMobil is field-testing multiple technologies to detect and speed repair of methane leaks in the Permian Basin and will begin testing the SOOFIE system as part of Project Falcon” said Bart Cahir, senior vice president of unconventional at ExxonMobil. “This is the latest example of how ExxonMobil is applying scientific rigor and taking meaningful steps to find commercially scalable and affordable solutions that help all operators improve safety and environmental performance.”

“Pioneer has committed to environmental stewardship in everything we do, every day, through our Stewardship 365 initiative” says Sri Sridharan, Sustainability and Environmental Programs Advisor for Pioneer Natural Resources. “We remain committed to doing the right thing, every day, and part of that is actively finding new solutions rather than just waiting for those solutions to present themselves. When we heard about Project Falcon and its goals of helping develop and optimize the next generation of technology for detecting methane emissions, we were 100% on board.”

Shell has announced a target to maintain methane emissions below .2% by 2025. “We are working hard in the Permian to reduce methane emissions and are looking for ways to enhance our existing leak detection program through collaborations with the scientific community and testing of new technologies, such as SOOFIE” says Steven Craig, Safety and Sustainability Manager at Shell. “While several detection technologies are being developed, the industry needs to guide the innovation process to solutions that are most effective.”

“Efforts to decarbonize the global energy supply are underway, but the oil and gas industry remains the backbone, providing affordable energy that improves the quality of life in both emerging and developed economies. As a responsible energy producer, we are committed to reducing our carbon footprint as we supply vital oil and gas” said Randy Dolan, co-CEO of TRP Energy. “We’ve always sought out partnerships with environmental thought leaders to gain perspective and find effective solutions to lower our full-cycle environmental impact. In that spirit, Project Falcon allows us to utilize cutting edge methane detection technology, collaborate with industry leaders, and share best practices with others.”

While Project Falcon specifically focuses on the use of SOOFIE sensors, the findings of the group will be useful regardless of which continuous monitoring system an operator may implement in the future. The goal of this project is to test and optimize implementation of real-time monitoring of methane emissions at the facility level. The results of Project Falcon will complement other efforts investigating sensor networks for continuous monitoring of emissions at a regional level.

“Despite being part of Scientific Aviation, I am first and foremost an atmospheric scientist” said Dr. Stephen Conley, president of Scientific Aviation. “And while myself and the other PhD scientists at Scientific Aviation are fully confident in the capabilities of SOOFIE, we don’t want the fight to protect the environment to be us against other companies with this type of technology. The findings of Project Falcon will be peer reviewed by the scientific community and published for everyone to see, providing valuable insights to

operators around the world about how to best implement and utilize continuous methane monitoring, regardless of which solution they choose.”

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About Scientific Aviation

Scientific Aviation, a leader in airborne research, is a scientific research company specializing in atmospheric measurements and emissions flux quantifications of methane, CO₂, and other trace gases, with applications for air quality, climate, leak detection and repair (LDAR), and atmospheric research. Our services and expertise provide our clients and collaborators with advanced capabilities to better understand our impacts on the atmosphere, and the sound data needed to make informed decisions. To learn more, visit www.scientificaviation.com.