

## TotalEnergies Deploys AUSEA Drone Technology to Advance Toward Near-Zero Methane Emissions

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TotalEnergies, a global multi-energy company, today announced the successful deployment of its advanced AUSEA (Airborne Ultralight Spectrometer for Environmental Applications) technology to detect and quantify methane and carbon dioxide emissions. Developed in collaboration with the French National Centre for Scientific Research (CNRS) and the University of Reims Champagne-Ardenne, this drone-based system is a key component of the company's strategy to achieve near-zero methane emissions from its operations by 2030.

Methane is a potent greenhouse gas with a global warming potential 28 times greater than that of CO2 over a 100-year period. Recognizing the critical importance of reducing these emissions, TotalEnergies has made it a priority to establish an exemplary track record in this area.

The AUSEA technology, developed since 2017, is an ultralight sensor mounted on a drone. This innovative solution provides access to hard-to-reach emission sources and delivers high-precision readings. The sensor, which features a diode laser spectrometer, is capable of detecting and quantifying methane emissions with a high level of accuracy (greater than 1 kg/h).

In a significant campaign conducted in 2022, TotalEnergies utilized the AUSEA technology to detect and measure emissions in real-life conditions across 95% of its operated upstream sites. More than 1,200 AUSEA flights were carried out across 125 sites in eight countries. This extensive deployment demonstrates the technology's effectiveness and scalability in a wide range of operational environments.

Looking ahead, TotalEnergies is focused on further enhancing the AUSEA system. The long-term objective is to create a seamless and autonomous system with an unmanned drone navigation system and instantaneous data processing. This automation will allow for the immediate delivery of results to local



facility operators and will enable an increase in the frequency of flights, further improving monitoring capabilities.

TotalEnergies is not only using this technology for its own operations but is also making it available to other operators. This action is part of a broader commitment to encourage the entire energy sector, including national companies, to accelerate efforts toward achieving zero methane emissions.

This initiative is a continuation of TotalEnergies' established leadership in methane reduction. Between 2010 and 2020, the company successfully halved its methane emissions by implementing a comprehensive action program targeting various sources, including flaring, venting, fugitive emissions, and incomplete combustion. The company has committed to an 80% reduction in methane emissions by 2030 compared to 2020 levels, exceeding the 75% reduction target set by the International Energy Agency (IEA) in its Net Zero Emissions by 2050 scenario. This ambitious goal underscores TotalEnergies' proactive approach to environmental stewardship and its dedication to a sustainable energy future.