

Permian Methane Campaign

The Permian Basin, spanning over 86,000 square miles of West Texas and Southeastern New Mexico, is the hottest oil and gas play in the world. While science shows that methane emissions from oil and gas development in the U.S. are 60% higher than EPA estimates, much about the Permian remains a mystery. Meanwhile, urgency to reduce this dangerous climate pollutant – responsible for a quarter of the warming we are experiencing now – grows every day.

That's why EDF is partnering with academic institutions and other technology providers to launch a first-of-its kind, comprehensive campaign to measure methane emissions and flaring efficiency in the Permian basin, in order to drive lasting solutions at the state, federal, and corporate levels.

First of its kind measurement collaboration

EDF along with Pennsylvania State University, Scientific Aviation and the University of Wyoming are embarking on a yearlong measurement project to quantify methane emissions in the Permian by site and region, track changes in emissions over time, pinpoint the highest-emitting sites and operators, and estimate the efficiency of flares.

With a combination of tower, aircraft and ground vehicle monitoring, they will collaborate and rapidly share information to better support robust data collection.

Data made public

The data will be shared – frequently, publicly and transparently – through a robust data platform, and complemented by regular analysis and innovative data visualization techniques. This will make the data accessible, meaningful and actionable for many.

Industry and other stakeholders will have an opportunity to speedily access important data that can support methane mitigation strategies and reduction goals.

Measurement Methods



Scientific Aviation

Over 100 flight days, an aircraftbased system will survey a large number of sites and quantify the largest emitters and regional emissions.



Pennsylvania State University

Four tower-based, stationary methane sensors will continuously measure regional methane concentrations.



University of Wyoming

Vehicle-based, site-level measurements of a subset of oil and sites identified by the aircraft will supplement and support aircraft-based data.

