

TRANSFORMING METHANE MANAGEMENT THROUGH DATA-DRIVEN OPERATIONAL PARTNERSHIP

How Coterra Energy (now Devon Energy, following the companies' merger completed May 7, 2026) reduced its methane intensity, optimized operational workflows, and created a scalable methane management framework

CASE STUDY AT A GLANCE

64%

methane intensity reduction
in the Permian Basin

51%

total Permian methane
emissions reduction

35%

methane reduction for
newly acquired assets

Upstream Production | Bridger Photonics' Gas Mapping LiDAR® (GML) | U.S. EPA OOOO

CHALLENGE

As methane expectations evolve across the oil and natural gas industry, operators need more than periodic leak detection programs or fragmented monitoring approaches. Coterra Energy (Coterra) sought to build a methane management system capable of driving continuous operational improvement across a large and evolving asset base while improving efficiency, accountability, and long-term emissions performance.

APPROACH:

Since 2021, Coterra and Bridger have built a highly integrated, performance-driven methane management model. Using Bridger's data, Coterra developed a repeatable framework that combines aerial methane measurement, equipment-level analysis, asset prioritization, retrofit execution, and corporate incentives to drive sustained emissions reductions while improving operational efficiency.



APPROACH CONTINUED:

A core innovation of Coterra's program was an emissions scorecard built from equipment-level baselines across its operations using Bridger's data. Rather than viewing performance only at the site level, Coterra evaluated individual equipment categories to identify where losses were occurring and where action was needed most. Subsequent aerial surveys were used to track progress, validate repairs, and flag high-emitting facilities for upgrades. This helped prioritize improvements including compressor electrification, centralized flaring, retrofits at older sites, and tankless designs for new builds. The scorecard program created a continuous improvement model driven by measurable results. The result was a shift from reactive leak response to proactive asset optimization.

The partnership also supported replacement of labor-intensive legacy screening methods. At applicable facilities, Bridger's aerial scans fully replaced voluntary drone-based OGI scans, reducing manpower requirements while increasing coverage efficiency.

BENEFITS

- Equipment-level methane insights supporting operational decision-making
- Reduced inspection burden and improved field deployment efficiency
- Continuous improvement framework established, driven by quantified measurement data
- More targeted capital allocation toward retrofits and mitigation actions
- Integration of methane performance into enterprise operational priorities
- Scalable framework adaptable across basins, acquisitions, and evolving portfolios



EMISSIONS INSIGHTS

Bridger's aerial methane measurements provided Coterra with a comprehensive operational view of methane emissions across its asset base. The equipment-level insights helped identify recurring emission patterns, prioritize mitigation activities, and strengthen operational performance.

The partnership also advanced how methane performance was managed organizationally. In 2022, Coterra began tying emissions performance to internal compensation metrics, initially based off of EPA Subpart W data. In 2024, the company advanced this approach by incorporating direct methane measurement data into the performance goals—an innovative step ahead of its peers.

This shift elevated methane management from an environmental initiative to an enterprise performance priority touching operations, maintenance, engineering, and leadership teams.

BUSINESS IMPACT

By integrating methane data directly into operational improvement, this shift reduced manpower requirements and windshield time, streamlined workflows, and allowed more resources and budget allocation to be directed toward repairs, retrofits, and operational improvements.

- Coterra reduced Permian Basin methane intensity by 64%, from 0.377% in 2022 to 0.138% in 2025
- Total Permian methane emissions decreased by 51%, including notable decreases in tank, flare, and well emissions
- Newly acquired assets achieved a 35% methane reduction between August 2025 and January 2026 after integration into the same management framework
- Legacy operated assets showed continued performance improvement and methane reduction through 2024 and into 2025
- Bridger's measurement data supported targeted retrofits, operational upgrades, and more efficient deployment of field resources
- Reduced spending on fragmented monitoring approaches enabled greater reinvestment into repairs, retrofits, and operational improvements



KEY TAKEAWAY

The Coterra and Bridger partnership demonstrates how methane measurement can evolve from a compliance activity into a scalable operational management system to continuous improvement. By combining recurring aerial measurement with equipment-level analytics, operational accountability, and targeted mitigation planning, the partnership created a repeatable framework that strengthens operational efficiency and improves long-term asset management.

Following the completion of Devon Energy's merger with Coterra Energy in May 2026, this methane management framework continues as part of Devon's combined operations.

ABOUT DEVON ENERGY

Devon Energy Corporation (NYSE: DVN) is a leading U.S. energy company focused on the exploration and production of oil and natural gas. On May 7, 2026, Devon completed an all-stock merger with Coterra Energy Inc., combining two established operators into a single company anchored by a top-tier position in the Delaware Basin. The combined organization operates under the Devon Energy name, continues to trade on the New York Stock Exchange under the ticker symbol DVN, and is headquartered in Houston, Texas, with a continued significant presence in Oklahoma City. Coterra's people, assets, and technical programs — including the methane detection and management partnership with Bridger Photonics described in this case study — are now part of Devon Energy's combined operations.