

Kathairos



Methane Venting Solution:
Liquid Nitrogen Emissions Elimination Skid

COMPANY DESCRIPTION

Kathairos Solutions offers a fully integrated platform that instantly eliminates methane venting at remote well sites by replacing instrument gas with liquid nitrogen to power pneumatics. Each skid arrives turnkey with a cryogenic tank, economizer, pressure-build circuitry, and telemetry hardware.

How it Works: Upon tie-in to existing pneumatic lines, the system uses liquid nitrogen's 700:1 expansion ratio to displace methane as a pneumatic power source, allowing the producer to retain the gas in the sales line. No external power or combustion is needed. Level sensors within each tank provide data on nitrogen level, pressure, and real-time abatement volumes to a cloud-based portal. The Kathairos ATLAS software displays hourly telemetry readings, measured vent rates, abatement metrics for ESG reporting and carbon offset generation potential. Under a simple rental model, Kathairos coordinates nitrogen delivery, installation support, routine refills from its continent-wide liquid nitrogen network, and full maintenance—eliminating all need for operator involvement.

Value Proposition: Kathairos delivers verifiable “zero-vent” performance from day one, with CO₂e intensity under 1% of all methane mitigated. Monthly rentals bundle equipment, installation, refills, and service into a predictable OPEX line, freeing operators from capital outlays. Rapid 4–8 week lead times and capacity for thousands of installs per year make large-scale emissions reductions achievable on aggressive schedules. The turnkey skid requires no changes to existing site infrastructure. With a demonstrated uptime of 99.985%, Kathairos provides a simple solution to meet evolving methane regulation requirements and accelerate operators' path to net-zero.



RECENT SUCCESSES

Kathairos now provides services for over 60 of North America's largest oil and gas producers, demonstrating system reliability and operator endorsement on single-well pads and multi-well sites alike. It's simple approach, with no new infrastructure or operator training required. Nitrogen has enabled producers to meet aggressive regulatory deadlines and voluntary reduction targets across every major basin from the Permian to the Peace River Arch.

The company's patent-pending technology earned top honors in both the 2021 Oil & Gas Cleantech Challenge and CRIN's Reducing Environmental Footprint Technology Competition, catalyzing a 70-location rollout with Ovintiv and Cenovus Energy. The company has directly mitigated over 510,000 tCO₂e to date and continues to grow quickly. The Kathairos technology also generates verifier-grade, serialized offsets for its Alberta customers. Building on its field-level success, Kathairos has expanded into carbon offset services, managing both aggregate and custom projects end-to-end, further cementing its role as a multi-purpose technology, software and carbon accounting solutions provider.

PTAC's Contribution to Success: Kathairos has collaborated with PTAC to foster a strong environment for technology development by engaging with end users, government funders, and innovation ecosystem partners. These efforts enhanced market understanding and supported broader technology deployment. Leveraging PTAC's platforms, including domestic events, the Methane Leadership Summit, Digital Innovation Forum, TERE committee, and global conferences like CERAWEEK, OTC, COP 29, and the World Petroleum Congress, Kathairos gained valuable exposure to both Canadian producers and international markets. These efforts have been instrumental in de-risking international market development and increasing the company's growth and visibility in North American markets. PTAC can support companies like Kathairos diversify export opportunities beyond the U.S. while reducing financial risk by providing modest funding supports. The collaboration between Kathairos and PTAC has contributed to continued growth in sales and employment despite geopolitical headwinds.

Notable Export Achievements:

1. Commercial operations in 7 U.S. basins
2. 480,000 tCO₂e eliminated
3. 67 of North America's largest oil and gas companies trust Kathairos to deliver reliable methane mitigation



KATHAIROS™

"PTAC has been a strong advocate of Kathairos and has played an important role in increasing the company's visibility to accelerate technology adoption"

-Jacqueline Peterson PhD.
Chief External Affairs Strategist

Employs liquid nitrogen to eliminate methane vents, streaming real-time data for emissions reporting. Flexible, affordable solution for well sites of all sizes – no power required.

\$5M External Funding Achieved



KATHAIROS™