

The “Oxiperator”

Fact Sheet / 2024

What It Is

All-metal, high-temperature, porous heat exchanger to oxidize methane emissions

What It Does

Oxidizes methane at concentration between 0.2% and 100%
Can drive a gas turbine to generate power from methane as weak at 1.5%
Destroys VOCs, CO (does not produce NOx)

Value Proposition

Meet Methane emissions reduction requirements
Mobile, modular units can be deployed in a matter of weeks
Generate greenhouse gas credits
Generate power from waste gas
Delivered ready to run; plug-and-play

Innovation

No catalyst. No ceramic fill. No flow reversal.
Continuous oxidation.

APPLICATIONS

Oil & Gas

Lean-burn gas engines: Eliminate methane slip at the exhaust
Tank vapors: Alternative to Vapor Recovery Units
Routine flares: Convert flares to useful electricity
Abandoned wells: Eliminate fugitive emissions

Coal Mine Methane

Ventilation air methane (VAM): Oxidize VAM at concentrations as weak as 0.2%
Abandoned Mine Methane and Drainage Methane: Power generation from methane concentrations 1.5% or higher

Landfill Methane

Generate power from methane emissions as weak as 1.5%
Oxidize fugitive methane plumes with concentration as low as 0.2%



Prabhu Energy Labs

Prabhu Energy Labs is a California company singularly focused on removing methane emissions, particularly concentrations below 1.0% (10,000ppmv) in air.

Our mission: To be the world leader in harnessing weak methane emissions.

Our vision: To make wetlands methane the new renewable energy.

Our 2030 goals:

1. Prevent 1 Gigaton of CO₂e of weak methane emissions from reaching the atmosphere annually.
2. Generate 100 Megawatts of clean power from weak methane emissions annually.

Leadership: Founder and CEO **Edan Prabhu** has three decades of energy innovation, with clean, renewable and weak fuels; methane, biomass, wind and solar. His earlier experience was with Southern California Edison. He has a Master's degree in mechanical engineering and has been granted 10 US patents on weak methane and other waste fuels.

Oxiperator for Methane Oxidation (0.2 < 1.0% methane concentration by volume)

Unit Size / Cubic Feet per minute (cfm) Airflow	Demo	Early Commercial
1,000 cfm (0.6 kg/airflow/sec)	2024	2025
10,000 cfm (6 kg/sec)	2025	2026
40,000 cfm (24 kg/sec)	2026	2027

Gas Turbine Size	Demo	Early Commercial
333 kW (4,000 cfm air, 2.4 kg/sec air flow)	2025	2025
1.6 MW (15,000 cfm air, 9 kg/sec air flow)	2026	2027

