Appendix E: One-page public summary document.

Company: Prabhu Energy Labs (PEL)
Project Title: *The Oxiperator for Oil and Gas Methane Emissions Reduction in Wyoming*

Methane (CH_4) is the primary component of natural gas. It's also a potent greenhouse gas with 86x more Global Warming Potential than CO_2 in the first 20 years after it enters the atmosphere. An odorless and invisible gas, methane is also a contributor to ground level ozone, which can be harmful to people, animals, crops, and other materials.

New environmental regulations have made methane emissions reduction in the oil and natural gas industry a priority, while market demand for low-emissions "differentiated" natural gas is increasing. It is both an economic and environmental benefit to reduce methane emissions.

Prabhu Energy Labs, together with Jonah Energy and the University of Wyoming's Center for Air Quality, will demo the Oxiperator, a first-of-its-kind methane mitigation technology. The Oxiperator R&D project addresses 1) compliance with federal methane regulations 2) the value of local power at remote sites and 3) production of low-emissions "differentiated" natural gas.

The demo at the Jonah Energy Pinedale production site in Wyoming will advance a solution to harness methane emissions for their own self-destruction, without the need for supplemental power. The Oxiperator makes it possible for very low concentrations of methane emissions to be used to generate energy for on-site use. The project will demonstrate that the Oxiperator can help reduce overall greenhouse gas (CO2e) footprint of oil and natural gas production without producing nitrogen oxides (NOx) - criteria pollutants and ozone precursors.

University of Wyoming's School of Energy Resources Center for Air Quality will participate in an advisory capacity, with students interacting with the project and contributing research papers to improve Wyoming's understanding of methane management. University of Wyoming also plans to provide emissions monitoring and measurement, an area in which they are nationally recognized.

This funding request is for Phase 1 of a multi-phase effort that will improve and scale the Oxiperator for market readiness. In this initial phase, PEL will install and test an Oxiperator at Jonah's Pinedale production site to demonstrate its ability to consume waste gas and utilize the energy usefully. Emissions will be monitored and measured before, during and after the Oxiperator demonstration, to show the potential to reduce CH4, CO2 and NOx compared to the current combustor.

Subsequent project phases will be submitted in future funding requests. It is anticipated that matching funds from the DOE and others will be available for future phases as well. PEL will demonstrate larger Oxiperators capable of stand-alone operation as well as Oxiperator systems coupled to gas turbines that generate electricity to create microgrids powered by waste gas.