



Commercializing Innovative Combustion & Sensing Technologies

NASDAQ: CLIR

March 2024

Presented by Dr. Jim Deller, CEO

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The following factors, among others, could cause actual results to differ materially from those set forth in this presentation:

- our limited cash, history of losses, and our expectation that we will continue to experience operating losses and negative cash flows in the near future;
- our ability to successfully develop and implement our technologies and achieve profitability;
- our limited operating history;
- changes in government regulations that could substantially reduce, or even eliminate, the need for our technology;
- emerging competition and rapidly advancing technology in our industry that may outpace our technology;
- customer demand for the products and services we develop;
- the impact of competitive or alternative products, technologies, and pricing;
- our ability to manufacture any products we design;
- general economic conditions and events and the impact they may have on us and our potential customers;
- our doing business in China and related risks with respect to intellectual property protection, currency exchange, contract enforcement and rules on foreign investment;
- the impact of a cybersecurity incident or other technology disruption;
- our ability to protect our intellectual property;
- our ability to obtain adequate financing in the future;
- our ability to retain and hire personnel with the experience and talent to develop our products and business;
- our success at managing the risks involved in the foregoing items; and
- other factors discussed in the section titled "Risk Factors" in our most recent Annual Report on Form 10-K.

We caution you not to place undue reliance on any forward-looking statements, which are made as of the date hereof or as otherwise specified herein. The Company undertakes no obligation to update any of these forward-looking statements to reflect actual results, new information or future events, changes in assumptions or changes in other factors affecting forward-looking statements, except to the extent required by applicable law. If we update one or more forward-looking statements, no inference should be drawn that we will make additional updates with respect to those or other forward-looking statements.

Free Writing Prospectus



This presentation highlights basic information about us. Because it is a summary that has been prepared solely for informational purposes, it does not contain all of the information that you should consider before investing in our Company. Except as otherwise indicated, this presentation speaks only as of the date hereof.

This presentation does not constitute an offer to sell, nor a solicitation of an offer to buy, any securities by any person in any jurisdiction in which it is unlawful for such person to make such an offering or solicitation.

Neither the United States Securities and Exchange Commission (the “SEC”) nor any other regulatory body has approved or disapproved of our securities or passed upon the accuracy or adequacy of this presentation. Any representation to the contrary is a criminal offense.

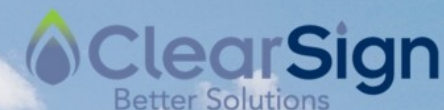
This presentation includes industry and market data that we obtained from industry publications and journals, third-party studies and surveys, internal company studies and surveys, and other publicly available information. Industry publications and surveys generally state that the information contained therein has been obtained from sources believed to be reliable. Although we believe the industry and market data to be reliable as of the date of this presentation, this information could prove to be inaccurate. Industry and market data could be wrong because of the method by which sources obtained their data and because information cannot always be verified with complete certainty due to the limits on the availability and reliability of raw data, the voluntary nature of the data gathering process and other limitations and uncertainties. In addition, we do not know all of the assumptions that were used in preparing the forecasts from the sources relied upon or cited herein.

Free Writing Prospectus (cont'd)



We have filed a preliminary prospectus supplement on March 18, 2024 (the "Preliminary Prospectus"), supplementing our shelf registration statement on Form S-3 (File No. 333-265967) (the "Registration Statement") with the SEC, with respect to the offering of our securities to which this communication relates. Before you invest, you should read the Preliminary Prospectus (including the risk factors described therein), the Registration Statement and, when available, the final prospectus relating to the offering, and the other documents we have filed with the SEC, for more complete information about the Company and the offering. You may obtain these documents, including the Preliminary Prospectus and Registration Statement, for free by visiting EDGAR on the SEC website at <http://www.sec.gov>. Alternatively, copies of the prospectus may be obtained, when available, from: Public Ventures, LLC by written request addressed to 14135 Midway Road, Suite G-150, Addison, TX 75001, telephone number (945) 262 9010, or by emailing info@publicventures.com.

ClearSign in 30 Seconds



Prevents Air Pollution & Enables Decarbonization

Nitrogen Oxides (NO_x) are a highly toxic and highly regulated pollutant from combustion. We essentially eliminate the emissions of NO_x from industrial sources, based on the current fuel mix and future energy transition plans to add hydrogen, which increases NO_x emissions.



Cost-Effective & “Best-In-Class” Solution

ClearSign burners enable customers to meet new and anticipated NO_x regulations at a fraction of the cost of traditional solutions. CA regulators recently designated performance as Best Available Control Technology (BACT).



Timely Investment Opportunity

Highly scalable business model with strong operating margins and comprehensive IP protection at a time when commercialization is accelerating in an expansive market.

Transforming Industrial Combustion

Problem

Nitrogen from the air is converted into the pollutant NO_x by two chemical paths in a flame. Incumbent burners address just one to reduce emissions.



Disruptive Solution

ClearSign's burners address **both** chemical paths that form NO_x . Plus, a “plug-and-play” design enables easy installation into refinery heaters and industrial boilers, as new builds or retrofits, to upgrade burners in the expansive energy infrastructure.

Structured for Sustained Growth

- Rationalized product line-up
- Asset light approach that leverages infrastructure of established industry partners
- Attractive operating margins and highly scalable “plug-and-play” design suitable for new builds and retrofits
- IP protection in large addressable market with expansion possibilities (new geographies, new applications, new technologies)



Cost-Effective Solution



Infrastructure Client Los Angeles, CA

- Small process heater
- Original NOx = 30 ppm
- New permit NOx requirement = 7ppm

Economics	CLIR (Pre-combustion tech)	SCR (Incumbent, post- combustion tech)
NOx, ppm	6	5
Capital Cost	\$450,000	\$2,200,000
5 Yr Operating Cost	\$25,000	\$500,000
Total Cost	\$475,000	\$2,700,000
Cost Ratio	1.0	5.7

Provides a cost-effective solution versus additional cap-ex and op-ex costs associated with existing methods

Expanding Global Installation Base



13 operating installations (30 burners)
4 installations in progress (22 burners)
2 regulatory performance thresholds set



Commercialization Advancing



Expanding Order Book

Order	Boiler Burner	Boiler Burner	Boiler Burner	Two Process Heaters	Process Heater	First of Four Boiler Burners	Two Process Heaters
Company	Medical Waste CA	Recycling Plant CA	Global Chemical TX	Refinery CA	Refinery CA	Food Processing CA	Refinery CA
Start up	Operating Q4 2023	Q2 2024	Operating Q4 2023	Operating Q1 2024	Q3 2024	Q3 2024	Q1-Q2 2025

Expanding Technology

DOE grant to develop technology for H₂ economy and decarbonization

\$0.25M Phase 1 DOE Grant	Up to \$1.6M Phase 2 DOE Grant	\$0.25M DOE Grant with Narion
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Expanding Customer Base

Refining Companies	Boiler Companies	Midstream Equipment Providers	Chemical Companies	Major Utilities
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Large Domestic & Global Market Opportunity

Estimated Process Burners Installed

28,000	California and Texas
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72,000	Total in US
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42,000	Europe
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280,000	Worldwide
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Estimated Boiler Burners Installed

7,000	California
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5,000	Texas
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57,000	Total in US
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350,000	In Critical Emissions Regions of China
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Representative average per burner price = \$100,000



**“You have the
best burners
in the world”**

- Lead engineer from 2022 California Refinery project customer demonstration

Process Burner data: Energy Information Administration – Refining Capacity 2021 & 2022 bp
Statistical Review of World Energy (estimation based on 1 burner per 250 bpd)
US Boiler burner data from CA air board records and scaled by population for other regions and
American Boiler Manufacturers Association 2015 Survey
China data from confidential sources

Capital Markets Snapshot



NASDAQ CLIR

Market Cap	\$42.0M
Cash & Short-Term Investments	\$7.2M
Long-Term Debt	\$0
Shares Outstanding	38.6M
Insider Holdings	20%
Burner Technology Patent Portfolio	110
Headquarters	Tulsa, OK
State of Incorporation	Delaware

Above data is as of September 30, 2023

Recent Commercial Developments

- **Feb 13, 2024:** Receives Best Available Control Technology (BACT) Determinations for Single and Multi Process Burner Heaters
- **Feb 7, 2024:** Announces First in Series of Four Boiler Burner Purchase Orders
- **Feb 7, 2024:** Announces Expected 2023 Q4 Revenue of Approximately \$1.2MM
- **Jan 17, 2024:** Announces Successful Start Up of Multi-Burner Heater in California Project
- **Sep 20, 2023:** Announces Support and Collaboration from SoCalGas for its Flexible Hydrogen Fueled Ultra Low NOx Process Burner Project
- **Aug 29, 2023:** Announces Award of Phase 2 Grant from Department of Energy to Commercialize Flexible Hydrogen Fueled Ultra Low NOx Process Burner
- **Jul 13, 2023:** Announces Collaboration Partner Narion Corp. Receives SBIR Grant to Develop Flame Methane Sensor
- **May 18, 2023:** Receives Follow on Process Burner Order for Two Multi Burner Heaters from a California Refinery
- **Apr 19, 2023:** Receives Engineering Order for Two Multi Burner Heaters from a California Refinery - *Apr 19, 2023*
- **Apr 5, 2023:** Successful Testing of Ultra-Low NOx Hydrogen Burner

Investment Summary



**Innovative burner
technology solution with
comprehensive IP
protection**

**Asset light, high margin,
highly scalable business
model**

**Gaining traction and
structured for rapid growth**

**Significant growth potential
in large global market**

**Experienced and
proven team**

**Cash flow breakeven within
sight**

Contact Us



ClearSign Technologies Headquarters

8023 E. 63rd Place, Suite 101
Tulsa, Oklahoma 74133
info@clearsign.com

Investor Relations

Matthew Selinger
Firm IR Group
415-572-8152
mselinger@firmirgroup.com

Management Team

Jim Deller, Ph.D.

Chief Executive Officer

Brent Hinds

Chief Financial Officer

Jeff Lewallen

Business Leader Refining & Ethylene

Matthew Martin

Chief Technology Officer

Manny Menendez

President ClearSign Asia Ltd.

Board of Directors

Robert T. Hoffman Sr., Chairman

Judith Schrecker

Jim Deller

Catharine de Lacy

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