



# Elemental Dynamics

## Harnessing elemental energy to power our world

Elemental Dynamics is a clean-tech development company focused on next-generation solar-thermal solutions. Our first innovation, the **Focused Concentrated Solar Power (FCSP)** system, uses advanced optical technology to **concentrate and magnify sunlight**, producing **high-temperature steam or process heat** for energy generation, industrial use, and water extraction and purification applications.

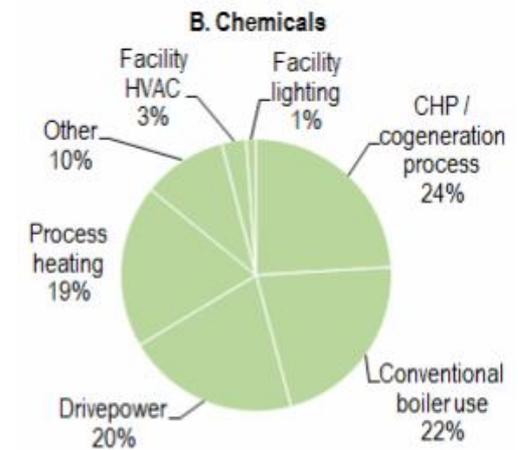
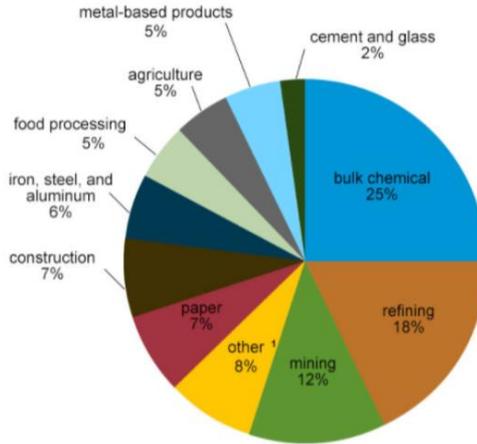


# Market Opportunity – Industrial Process Heat

- Nearly **10% of all U.S. energy consumption** is used for **industrial process heating**—most of it powered by fossil fuels. Many companies attempt to offset these costs with **solar PV**, but photovoltaics convert only **~16% of sunlight into electricity** and cannot produce the **high-temperature heat** required for industrial applications.
- The **Elemental Dynamics FCSP system** directly converts sunlight into **usable thermal energy**, delivering **temperatures exceeding 400°F** with far greater efficiency and lower operating costs—making it the ideal renewable solution for process heat and cogeneration.

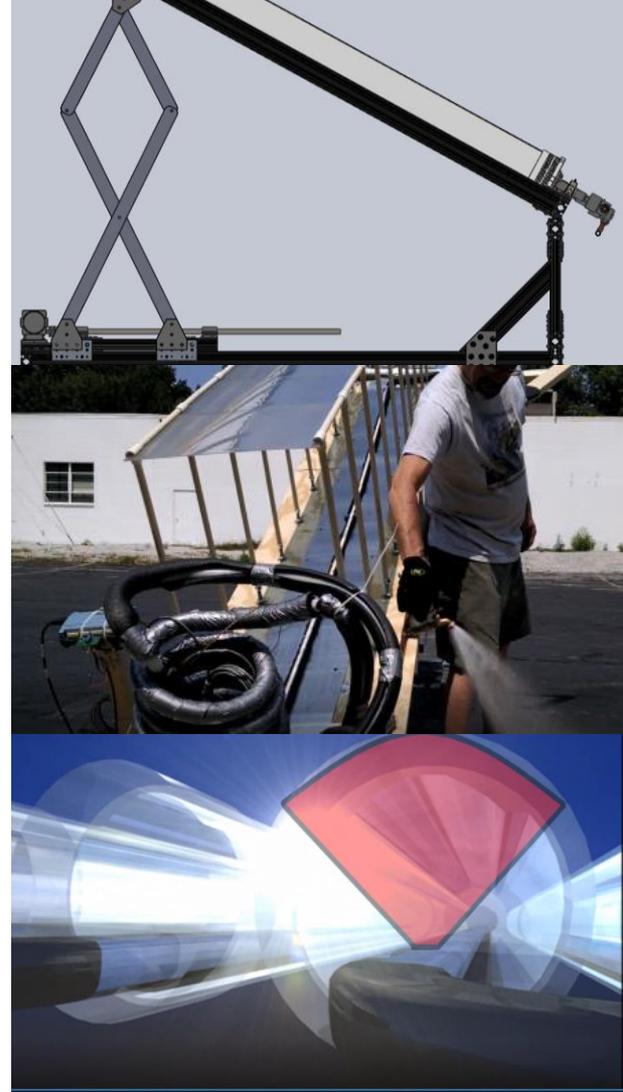
Total global heating equipment market is over \$28.8 billion

# Initial Market TAM



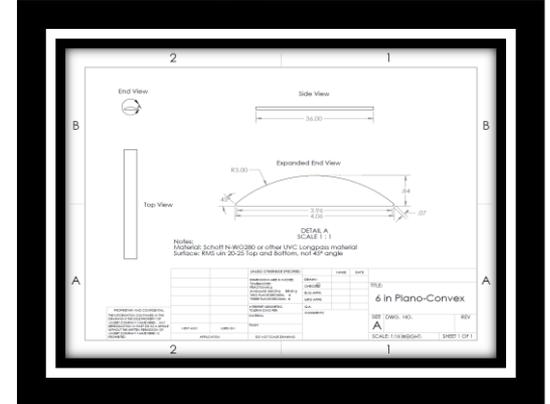
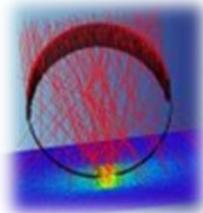
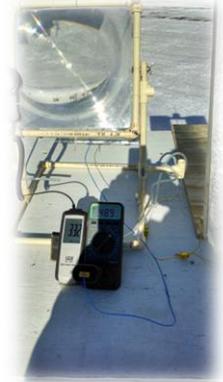
# Solution

Through extensive testing with a prototype built from off-the-shelf components, we developed an optimized solar focusing and magnification system. By precisely adjusting for seasonal azimuth and daily rotation, we can harness the Sun's full intensity and focus it directly onto the thermal absorber.



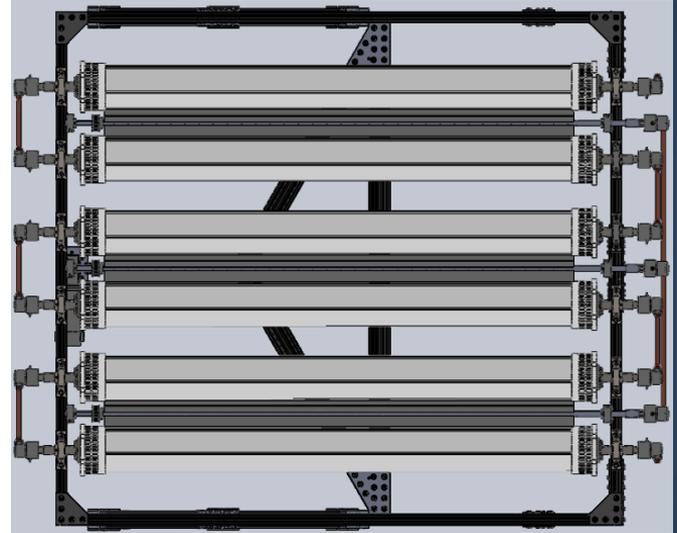
# Process

Through extensive testing and simulation of various technologies and configurations, we developed an optimized lens design that maximizes solar concentration and thermal efficiency



# Current Status

- **Feasibility testing completed** – core thermal and optical performance validated
- **Engineering and paper design finalized** – system ready for prototype build
- **Physical lens fabricated and tested** – confirmed focusing precision and heat output
- **Intellectual property in progress** – patent documentation underway for key innovations



# Current Progress

- **Multiple grant applications submitted** for non-dilutive funding opportunities
- **Equity financing actively pursued** to support prototype and pilot deployment
- **Glass fabrication and manufacturing partners onboarded** for lens and system production
- **Founder Institute program completed**—business model refined and investor readiness achieved
- **Access to Global Founder Institute mentors** providing strategic guidance and industry connections



# Key Features

- **Self-Cleaning System:** Automated cleaning maintains optical efficiency and reduces maintenance.
- **Modular Design:** Compact form factor ideal for rooftops and space-constrained environments.
- **Universal Mounting:** Installs easily on any flat surface, ground or rooftop.
- **Smart Wind Mitigation:** Automatic stow and load-reduction for storm protection.
- **High-Efficiency Thermal Receiver:** Advanced insulation maximizes heat retention and output.
- **Recurring Revenue Services:**
  - **Data Analytics:** Real-time system performance monitoring.
  - **Preventive Maintenance Contracts:** Predictive service to ensure peak efficiency and uptime.

# FCSP Advantage

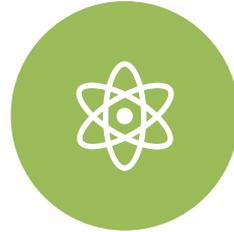
- **Multi-Utility Output:** Generates clean **heat, electricity, and water** from a single system.
- **Compact & Modular:** Fits rooftops or ground sites—scalable for commercial or community use.
- **High Thermal Efficiency:** Advanced lens design delivers superior heat concentration without mirrors.
- **Reliable & Resilient:** Operates independently of the grid with smart wind-stow protection.
- **Low Maintenance:** Self-cleaning surfaces and automated tracking reduce downtime and cost.
- **Sustainable ROI:** Cuts energy expenses and emissions while creating recurring service revenue streams.



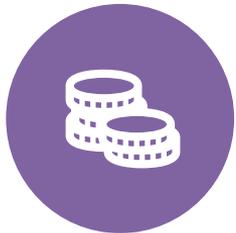
# Go To Market



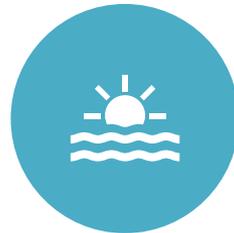
**Target Market** – Primarily large buildings with flat roofs in need of efficient energy generation starting with industry and hospitality



**Value Proposition** – FCSP can generate steam extremely efficiently, to create electrical energy, supplement hot water and radiant heating in the same cycle



**Pricing Strategy** – Based on a comparative form factor, vs power output, of PV panels, a 50%+ gross margin is possible



**Distribution Plan** – Initial system builds will take place in Southern Florida, with the primary market being the solar friendly areas of the US. Elemental Dynamics will perform the first 100 installations before engaging a third party.

# Competition

Our primary competitor, **photovoltaic (PV) solar panels**, are inexpensive and widely available but convert only about **16% of sunlight into energy** at installation—and performance declines with heat, dust, and age.

**Traditional reflective CSP systems** achieve higher efficiencies (around **70%**) but are **bulky, costly, and maintenance-intensive**. Their large mirror arrays lose efficiency when soiled, and their **exposed thermal receivers** suffer from significant heat losses to the atmosphere.

**Elemental Dynamics' Focused CSP (FCSP)** technology combines the **thermal efficiency of CSP** with a **compact, insulated design** that protects the receiver from environmental losses. Our system includes **autonomous cleaning and wind-stow features**, maintaining peak performance and reliability over a **20+ year lifespan** with minimal maintenance.

# Product Offerings

## Elemental Dynamics – Focused Concentrated Solar Power (FCSP) System

A modular solar-thermal unit that converts sunlight into clean heat, electricity, and purified water—all from one platform.

### Core Offerings:

- **FCSP System Sales:** Direct sales and installations for industrial, hospitality, and off-grid applications.
- **Turnkey Energy Solutions:** Custom system design, installation, and commissioning.
- **Power/Heat/Water-as-a-Service (PaaS/HaaS/WaaS):** Zero-upfront-cost options with recurring revenue.
- **Maintenance & Analytics:** Real-time monitoring, predictive maintenance, and performance optimization.
- **OEM & Licensing Partnerships:** Integration into larger energy or water systems for global scalability.

**Value:** Reliable, high-efficiency, multi-utility renewable solution that reduces fuel costs, emissions, and water scarcity.

# Investment Opportunity

We are seeking a **\$3 million investment** for a **10% equity stake in Elemental Dynamics**. More than funding, we seek a **strategic partner** who shares our mission to advance clean, distributed solar-thermal energy.

We propose a **Stage-Gate Investment Approach** to manage technical validation and risk:

- **Feasibility Stage – \$100K (6 months):** Validate lens performance achieving **400°F at a ¼-inch focal width** on the receiver surface.
- **Development Stage – \$500K (6 months):** Build and test a **fully functional MVP prototype**.
- **Production Stage – \$2M (12 months):** Manufacture and deploy **20 market-ready FCSP systems** for pilot customers.

This phased strategy ensures measurable progress, efficient capital use, and early proof of performance to accelerate commercialization.