



# First Quarter 2023 Earnings

Heliogen

# Disclaimer

## Forward-Looking Statements

This presentation contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Statements that are not historical in nature, including the words “anticipate,” “expect,” “suggests,” “plan,” “believe,” “intend,” “estimates,” “targets,” “projects,” “should,” “could,” “would,” “may,” “will,” “forecast” and other similar expressions are intended to identify forward-looking statements. These forward-looking statements include, but are not limited to, statements regarding our commitment to accelerating our sales and establishing stronger relationships with our commercial partners, our focus on perfecting our product-market fit, our plans to expedite the deployment of large-scale projects, extend our liquidity runway, achieving our financial and operational goals and future growth opportunities. Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. Many factors could cause actual future events to differ materially from the forward-looking statements in this press release, including but not limited to: (i) our financial and business performance, including risk of uncertainty in our financial projections and business metrics and any underlying assumptions thereunder; (ii) changes in our business and strategy, future operations, financial position, estimated revenues and losses, projected costs, prospects and plans; (iii) our ability to execute our business model, including market acceptance of our planned products and services and achieving sufficient production volumes at acceptable quality levels and prices; (iv) our ability to maintain listing on the New York Stock Exchange; (v) our ability to access sources of capital to finance operations, growth and future capital requirements; (vi) our ability to maintain and enhance our products and brand, and to attract and retain customers; (vii) our ability to scale in a cost effective manner; (viii) changes in applicable laws or regulations; (ix) developments and projections relating to our competitors and industry; and (x) our ability to protect our intellectual property. You should carefully consider the foregoing factors and the other risks and uncertainties disclosed in the “Risk Factors” section in Part I, Item 1A in our Annual Report on Form 10-K for the annual period ended December 31, 2022 and other documents filed by Heliogen from time to time with the Securities and Exchange Commission. These filings identify and address other important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. Forward-looking statements speak only as of the date they are made. Readers are cautioned not to put undue reliance on forward-looking statements, and Heliogen assumes no obligation and does not intend to update or revise these forward-looking statements, whether as a result of new information, future events, or otherwise.

# Today's Agenda



**Progress on Strategic Initiatives**



**Financial Update**



**Closing Remarks**

# First Quarter 2023 Earnings Updates

# 2023 Strategic Priorities

*Announced on February 16, 2023, following CEO transition*

## Closing sales

- Prioritize Heliogen's fastest path to growing its revenue backlog
- Emphasize industrial steam: the product with the highest level of technical readiness and near-term impact
- Demonstrate product-market fit effectively and prove the value of Heliogen's technology to customers

## Installing commercial-scale projects

- Data unlocks demand: Provide commercial-scale, real-world operating data for prospective customers

## Extending liquidity runway

- Cut costs and streamline the organization by focusing efforts on driving tangible, immediate results
- Position Heliogen for a future capital raise



# Recent Progress on Strategic Priorities

<b>Closing sales</b>	<ul style="list-style-type: none"><li>• Signed contract for engineering services for a potentially large, long-term customer</li><li>• Implemented internal changes to the sales team including additions, terminations, and realignment</li><li>• Streamlined the customer acquisition process from lead generation to execution</li></ul>
<b>Installing commercial-scale projects</b>	<ul style="list-style-type: none"><li>• Began automated, high-volume heliostat production at manufacturing facility in Long Beach, CA for Proxima hydrogen project in Lancaster, CA</li><li>• Completed the preliminary design for the Proxima</li><li>• Secured 120-acre site with a lease agreement with purchase option; includes water rights</li></ul>
<b>Extending liquidity runway</b>	<ul style="list-style-type: none"><li>• Implemented cost reduction program, reducing cash operating expense and capital expenditures including:<ul style="list-style-type: none"><li>• Deferring capital expenditures until we sign additional contracts</li><li>• Reducing operating expenses, including a 15% headcount reduction</li><li>• Limiting R&amp;D to a small group focused on key long-term differentiators</li></ul></li></ul>

# Heliogen Has Made Significant Progress Since Public Debut

## 2022

**February 2022:** Awarded Exclusive Rights at Brenda Solar Energy Zone



**February 2022:** Announced site prep for Long Beach manufacturing facility



**August 2022:** Announced partnership with Dimensional Energy for production of sustainable aviation fuel



**October 2022:** Selected to receive \$4.1 Million award from US DOE to decarbonize cement production



**December 2022:** Successfully performed automated installation of Gen. 5 heliostats



**March 2022:** Signed contract for commercial-scale demonstration project with Woodside Energy



**May 2022:** Began testing & implementation of supercritical SCO<sub>2</sub> system with Hanwha Power Systems for Woodside project



**September 2022:** Held first Investor & Analyst Day in Long Beach, CA



**September 2022:** Completed build-out of Long Beach production facility



**November 2022:** Entered into an MOU with City of Lancaster for a green hydrogen facility



## 2023

**March 2023:** Formed Board of Directors Strategy Committee to oversee implementation of long-range plan and strategic initiatives



**March 2023:** Achieved successful accumulation of over 125 hours of operational life and 25 miles travelled on ChariotAV in customer environment



**March 2023:** Completed preliminary design and secured site for Proxima green hydrogen project



**April 2023:** Began high-volume, automated heliostat production



# Financial Update

First Quarter 2023 Selected Financial Data		
(\$ in millions)	1Q 2023	4Q 2022
Revenue	\$1.9	\$4.7
R&D <sup>1</sup>	\$4.8	\$9.5
SG&A <sup>2</sup>	\$13.4	\$14.1

## Financial Highlights

- Revenue primarily from progress on Capella project for Woodside and DOE
- Inflation Reduction Act expected to provide meaningful tailwinds for Heliogen and its prospective customers

1. Excludes \$0.5 million and \$2.3 million of non-cash stock-based compensation expense for 1Q 2023 and 4Q 2022, respectively

2. Excludes (\$9.8) million and \$5.7 million of non-cash stock-based compensation expense/(benefit) and \$0.6 million and \$0.7 million of depreciation and amortization expenses for 1Q 2023 and 4Q 2022, respectively



# Appendix

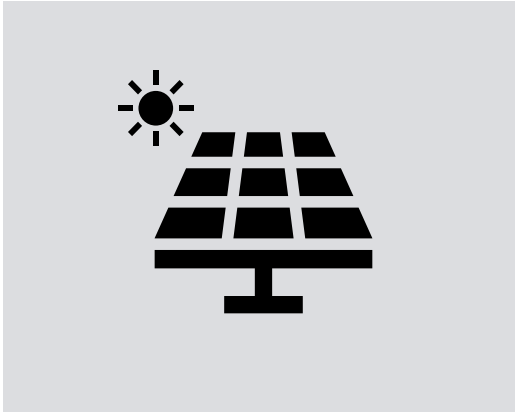




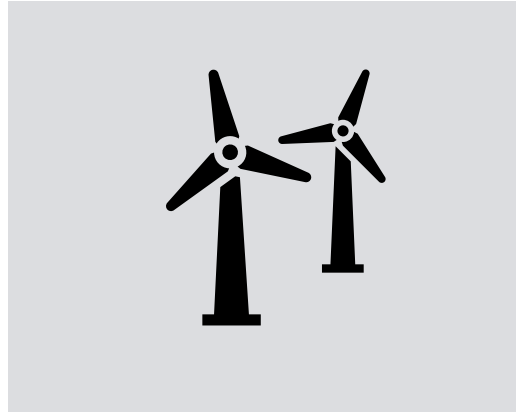
**Heliogen aims to be the leading technology provider for industrial decarbonization**

**using our AI-enabled, concentrated solar technology and thermal energy storage to deliver carbon-free heat, steam, power, and green hydrogen**

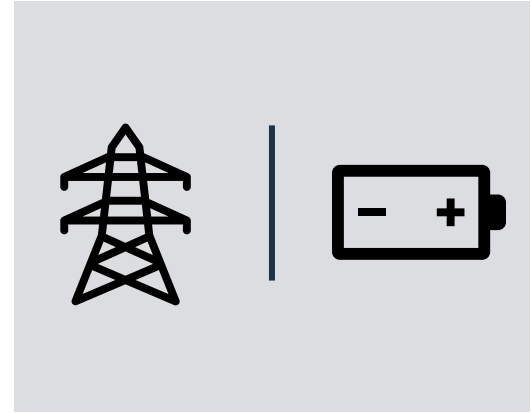
# There Is Currently No Efficient Way to Abate Industrial Emissions



Solar power is only available while the sun is shining



Wind power is only available while the wind is blowing



Methods to store or transport renewable energy are expensive

**Heavy industry is directly responsible for 25% of global emissions<sup>(1)</sup>, but lacks an efficient way to reduce its carbon intensity; industrial energy must be consistently available, cost-effective and reliable**

# Heliogen's Offerings: Energy on Demand



## Heat

Heliogen converts solar thermal energy into steam for heat-intensive industrial processes

### Industries

Mining, Petrochemicals, Metal Processing, Food and Beverage

### Delivery range

Up to ~1 mile (approx.)



## Power

Combining solar thermal energy and storage with power blocks will generate dispatchable electric power

### Industries

Utilities, Data Centers

### Delivery range

Up to ~100 miles (approx.)



## Fuel

Heliogen couples carbon-free steam and/or power with electrolyzers to produce green hydrogen fuel

### Industries

Transportation, Heavy Equipment, Chemicals

### Delivery range

Up to ~10,000 miles (approx.)

**HelioHeat represents near-term growth opportunity;  
HeliPower further expands the enormous opportunity set**

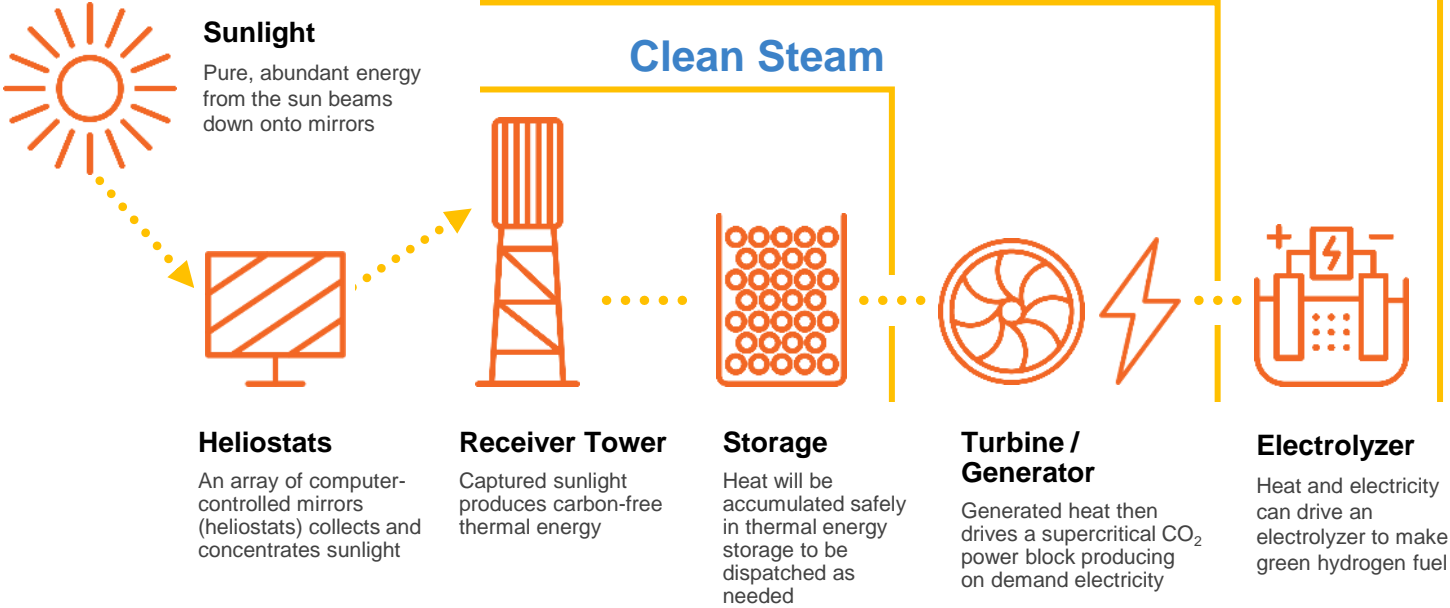
# Five Fundamental Characteristics That Set Heliogen Apart

- 1. Durable Competitive Advantages:** Extensive patent portfolio, trade secrets and learnings will enable Heliogen to maintain and defend its competitive advantages
- 2. Cutting-edge Software Makes It Work:** Utilizes artificial intelligence, software and cost-effective computation power to simplify and reduce hardware production, installation and maintenance costs and to generate more energy
- 3. Vertical Integration of AI:** Allows utilization of Heliogen's AI across entire value chain to reduce costs
- 4. Modularity Enables Scalability and Execution:** Our offerings are modular, making it possible to scale to our customers' behind-the-meter needs while also supporting more efficient execution
- 5. The Right Management Team:** Expertise in technology, financial management, EPC, manufacturing and solar design and sales well-suited to Heliogen's needs

Heliogen has the potential to profitably transform the world's energy production and meaningfully address climate change

# How it Works

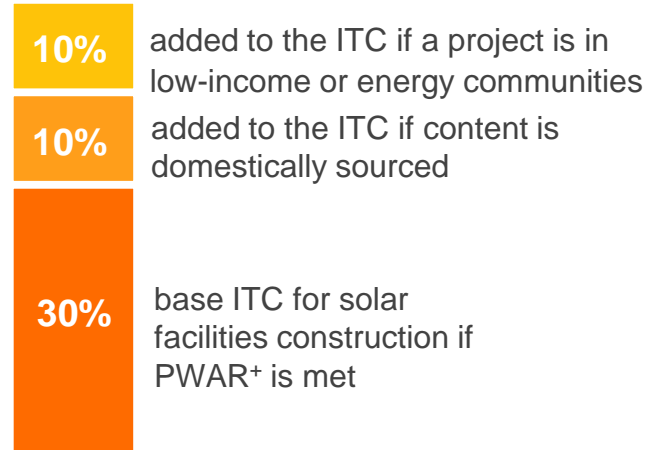
## Green Fuels



# Inflation Reduction Act – A win for all

New incentives catalyze the industrial decarbonization and boost project economics, giving the industry some much-needed certainty

## ITC Potential for Solar Energy Facilities



*Additional credit and funding opportunities being explored as further guidelines emerge*

\*Production Tax Credit ; \* Prevailing Wage Apprenticeship Requirements

On top of the Investment Tax Credit (“ITC”), the bill benefits Heliogen and our partners from multiple angles:

## Hydrogen

- Hydrogen PTC\* at **\$3.00 per kg** cost savings

## Advanced Manufacturing

- Production credits for manufacturing eligible clean energy components

## Thermal Energy Storage

- The Act extends the ITC to energy storage equipment

## Sustainable Aviation Fuel

- SAF gets a boost with a credit of up to \$1.75/gallon of SAF

## DOE Loan Guarantee Program

- An additional **\$3.6 billion** for the Title 17 loan program, raising the total funds available to **\$40 billion**.

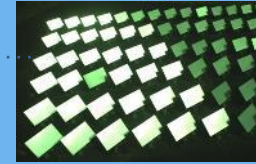
# Our patented control system is the first ever to dynamically track thousands of mirrors with real-time feedback



The sky is very bright next to the sun, and the intensity decreases further away

Sun & intensity gradient

4 cameras



Heliogen's Heliostat Operating System (H.O.S.)

The cameras measure the intensity of sky reflected in each mirror.

Using these four intensity measurements, we calculate the mirror orientation and therefore the direction of the beam, allowing real-time perfect tracking.

H.O.S. is the first commercial closed-loop heliostat field control system.



# Lancaster Solar Concentrating Facility

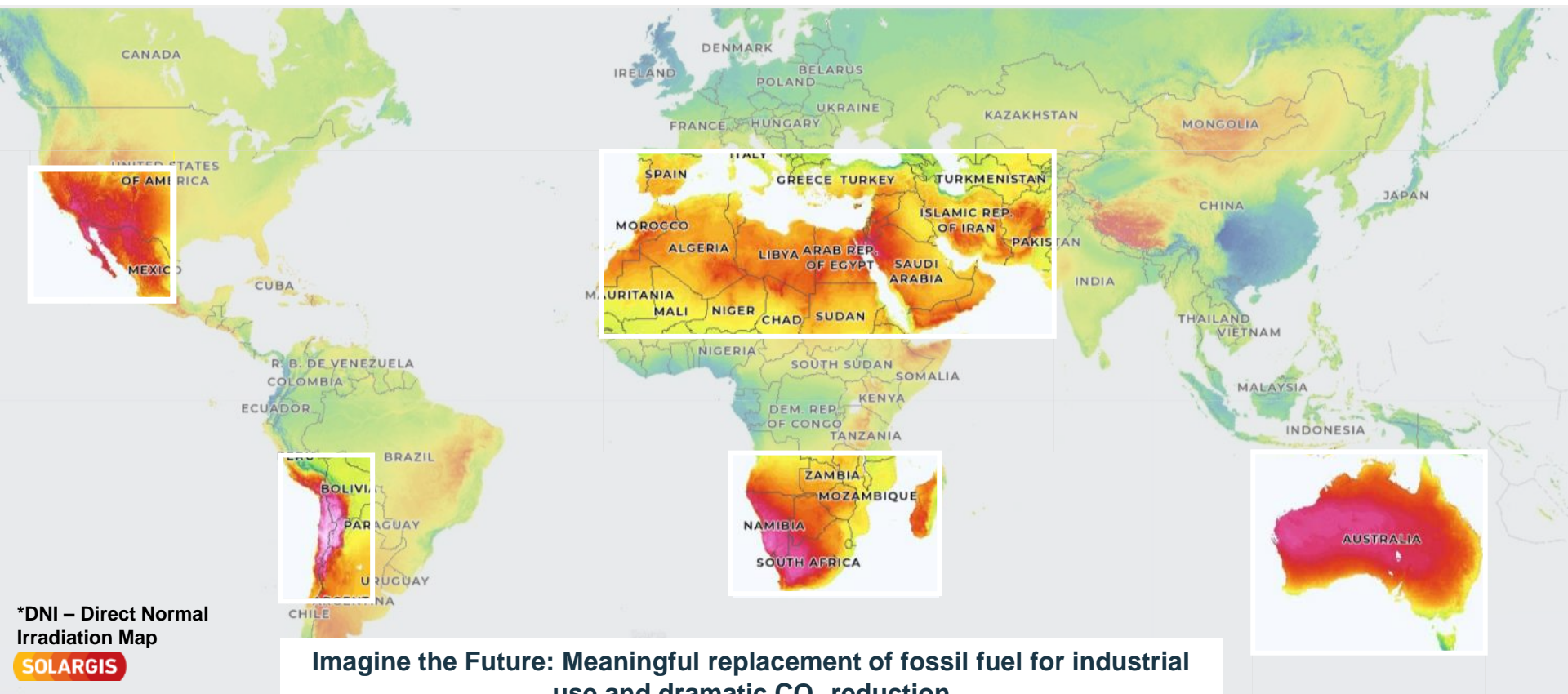
Since 2019, Heliogen has operated a concentrating solar thermal energy facility in Lancaster, California

Technologies are tested and validated here before moving to commercial-scale applications

- Successful green hydrogen production demonstration with Bloom Energy
- First field test of autonomous installation/maintenance robots
- Plan to produce sustainable aviation fuel (SAF) with Dimensional Energy on-site



# Heliogen's Bold Vision: 1000s of Towers in the 5 Sunniest Areas on Earth



\*DNI – Direct Normal Irradiation Map



**Imagine the Future: Meaningful replacement of fossil fuel for industrial use and dramatic CO<sub>2</sub> reduction**