

An aerial photograph of a heliostats field at sunset. The heliostats are arranged in a curved pattern, and their surfaces are reflecting the golden light of the setting sun. The ground is dark and textured, with long shadows cast across it.

**Heliogen**

# Fourth Quarter 2023 Earnings

March 26<sup>th</sup>, 2024

# 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 plans to expedite the mechanical completion and first production of large-scale projects, extend our liquidity runway, and establish partnerships to sell our heliostat, software and system design services, our value engineering efforts to refine project design and reduce costs, our plans to secure additional funding through federal and state government incentive programs, Gen. 3 CSP development efforts, 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 presentation, 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) the suspension of trading of our common stock, and the commencement of delisting proceedings, on the New York Stock Exchange and the commencement of trading of our common stock in the over-the-counter market; (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; (x) unexpected adjustments and cancellations related to our backlog; and (xi) 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 year ended December 31, 2022, as supplemented in our Quarterly Reports on Form 10-Q for the quarter ended March 31, 2023 and September 30, 2023, 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

**01**

## Business Update

Updates and Highlights from 4Q 2023 | Commercial Pipeline Update | 2024 Priorities

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**02**

## Financial Update

Current Backlog & Orders | 4Q 2023 Income Statement Review | 4Q and FY 2023 Cash

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**03**

## Closing Remarks

# From 3Q 2023 to 4Q 2023

3Q Earnings Deck

**Leading Edge Concentrated Solar Thermal Energy & Storage Technology**  
Plan, design and build projects for integration into customer operations

**Proprietary Heliostat Designed for Manufacturing Excellence**

Generation 3	Generation 4	Generation 5
<ul style="list-style-type: none"> <li>Reflective Area: 1.0m<sup>2</sup></li> <li>Production Method: Manual</li> <li>Install Mechanism: Crane Lift</li> <li>Install Process: Manual</li> <li>Wind Resistance: 40 mph</li> <li>Automation: 0%</li> <li>Mean Quality: 100%</li> <li>Intersect (Depth): 30 years</li> <li>Installed Cost: \$8</li> </ul>	<ul style="list-style-type: none"> <li>Reflective Area: 1.25m<sup>2</sup></li> <li>Production Method: CNC Automated</li> <li>Install Mechanism: Crane Lift</li> <li>Install Process: Crane Hoist/Manual</li> <li>Wind Resistance: 40 mph</li> <li>Automation: 100%</li> <li>Mean Quality: 100%</li> <li>Intersect (Depth): 30 years</li> <li>Installed Cost: \$5</li> </ul>	<ul style="list-style-type: none"> <li>Reflective Area: 1.87m<sup>2</sup></li> <li>Production Method: Fully Automated</li> <li>Install Mechanism: Crane Hoist</li> <li>Install Process: Fully Automated</li> <li>Wind Resistance: 40 mph</li> <li>Automation: 100%</li> <li>Mean Quality: 100%</li> <li>Intersect (Depth): 30 years</li> <li>Installed Cost: \$3</li> </ul>

**Executing to Demonstrate Incremental Success**

Year	Key Milestones	Defining Success
2023	<ul style="list-style-type: none"> <li>Operate Solar Field Laboratory, CA at a Pilot</li> <li>Establish run-time efficiency</li> <li>Validate software &amp; plant controls</li> <li>Deliver constant power delivery</li> <li>Continued focus on measurement</li> </ul>	<ul style="list-style-type: none"> <li>Successful demonstration facility driving operating metrics:                             <ul style="list-style-type: none"> <li>• Full measurement and control</li> <li>• Software and plant control reliability</li> <li>• Measure equipment efficiency</li> </ul> </li> </ul>
2024	<ul style="list-style-type: none"> <li>Integrate Applications into commercial project</li> <li>Improve joining accuracy</li> <li>Reduce number of joints</li> <li>100% analysis and design/mfg</li> <li>Low cost: \$4/m<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>Accumulate operating &amp; maintenance experience to reevaluate future service structure</li> <li>Deliver operating records to support performance guarantees required in commercial negotiations</li> </ul>
2025	<ul style="list-style-type: none"> <li>Transformational Gen 3 CSP<sup>®</sup> Efficient &amp; Cost Effective Deployment</li> <li>Reduce particle erosion</li> <li>High efficiency iCOC<sub>2</sub></li> <li>Low carbon depth-hull energy</li> <li>Finance and Develop Structure</li> </ul>	<ul style="list-style-type: none"> <li>Validate unit cost economics and cost to install (scope)</li> <li>Industry-leading intellectual property and patents from Gen 3 CSP<sup>®</sup></li> </ul>

4Q and Subsequent Headlines

- ✓ Executed **joint development agreement** with a leading local developer to deploy Heliogen's solar energy technology in Mexico
- ✓ Executed a **contract** with Woodside Energy for up to \$1.6 million to progress engineering and development for the Brenda project
- ✓ Increased commercial pipeline significantly with **qualified leads growing to 2.0 GW from 1.8 GW** and Pre-FID activities up 55 MW
- ✓ Validated effectiveness of Heliogen's **proprietary software control system** at Sandia National Laboratories' testing facility
- ✓ Began TX Steam site preparation for **heliostat field installation**
- ✓ **Developed and executed** on an operating cost reduction plan, forecasted to address both investment and operating needs into March 2025 with further opportunities under evaluation

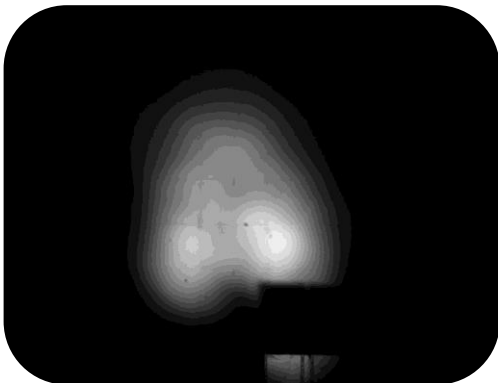
# Our proprietary software receives 3<sup>rd</sup>-party validation

Project with Sandia National Laboratories results in confirmation of Heliogen's software ability to improve solar field performance

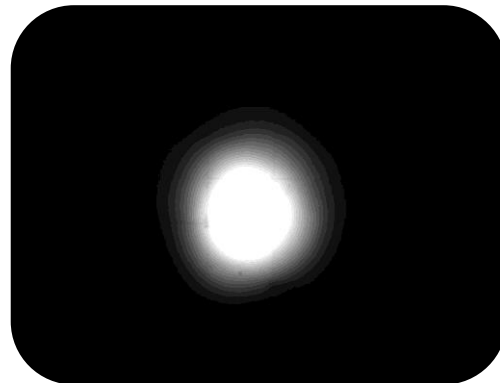
## Results

- The collaboration project demonstrated the successful deployment of our software on third-party heliostats
- Reduced tracking error means improved beam quality
- Implications include opportunities to license software as a stand-alone offering to projects with other hardware deployed

Before SOHOT correction



After SOHOT correction



National Solar Thermal Test Facility



Image source: <https://twitter.com/SandiaEnergy>

# Capella Project: Major Accomplishments Achieved in 2023; Efforts Underway to Reduce Net Cost

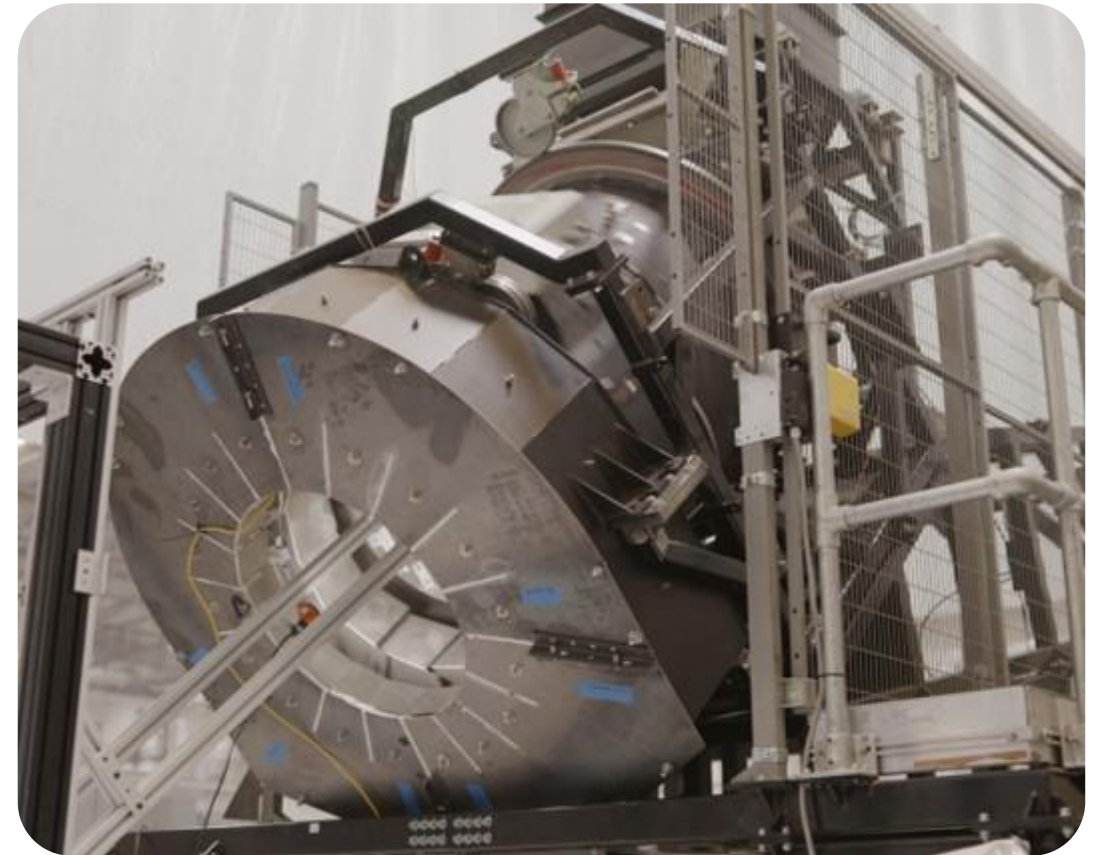
## Recent Milestones and Achievements

- Completed Front-End Engineering Design (“FEED”), resulting in an updated schedule and a Class 2 cost estimate
- Brought centrifugal particle receiver test article online, implemented and validated critical design improvements necessary for Capella scale-up
- Received airspace approval from US Department of Defense
- Completed design of the first commercial integrally geared sCO<sub>2</sub> power block and procurement of all major components
- Conducted multiple manufacturing trials for primary heat exchanger, leading to improved understanding of cost-effective manufacturing process

## Efforts Underway to Reduce Net Loss

- Class 2 estimate was \$168 million, \$53 million higher than prior estimate, driven by labor and commodity cost inflation and non-recurring development
- The goal will be to leverage the first-of-a-kind development costs across future iterations of Generation 3 CSP projects
- Efforts are underway across two important fronts:
  - Reduce cost through value engineering to further simplify the design
  - Source additional funding through 3<sup>rd</sup> parties that support novel clean energy solutions, in collaboration with our customer Woodside Energy

## Heliogen’s Particle Receiver

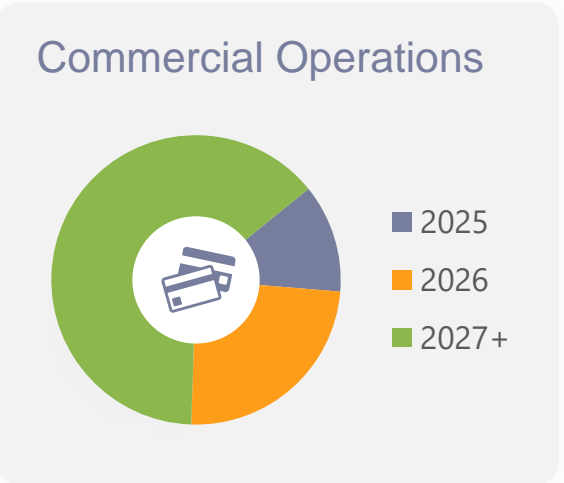
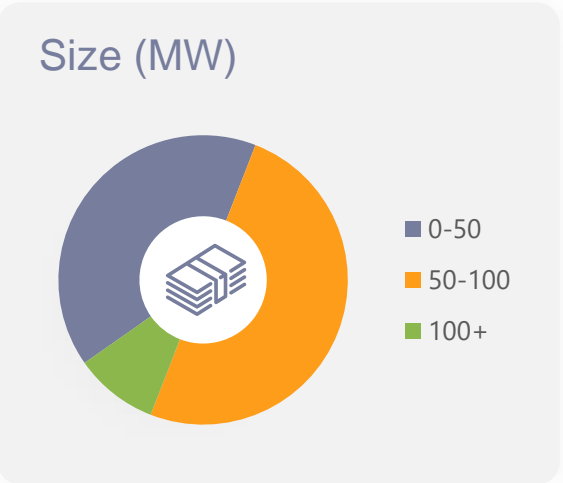
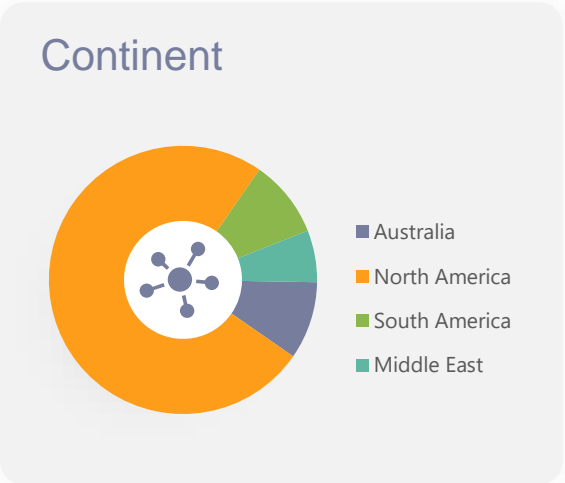
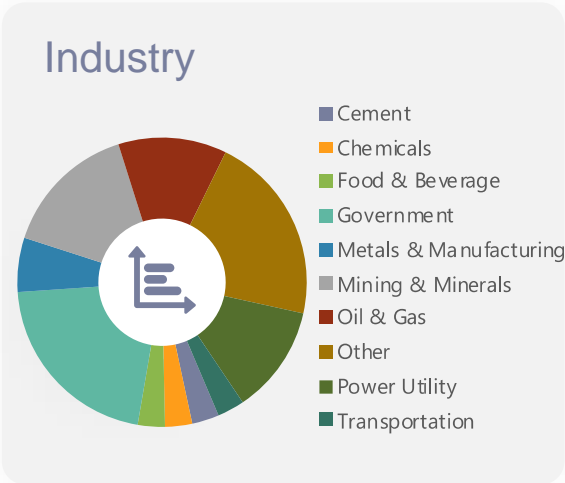
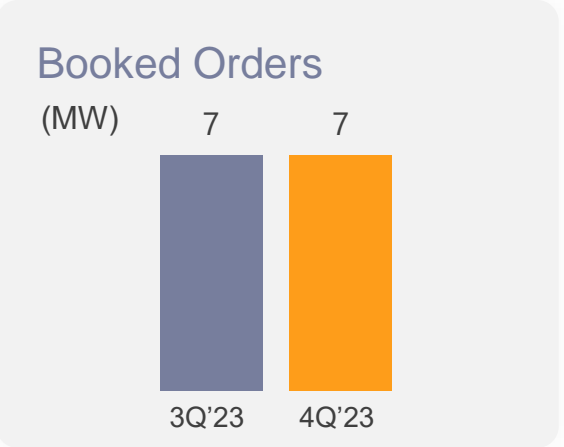
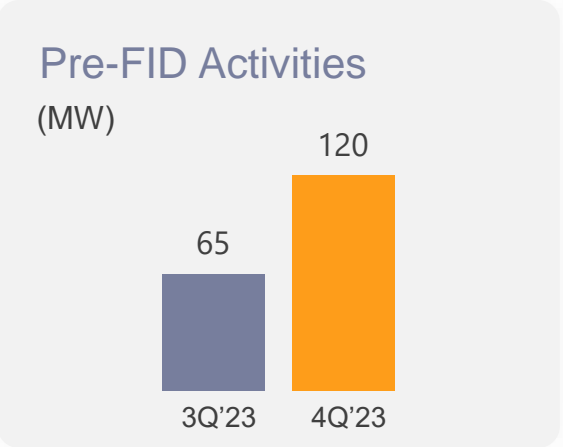
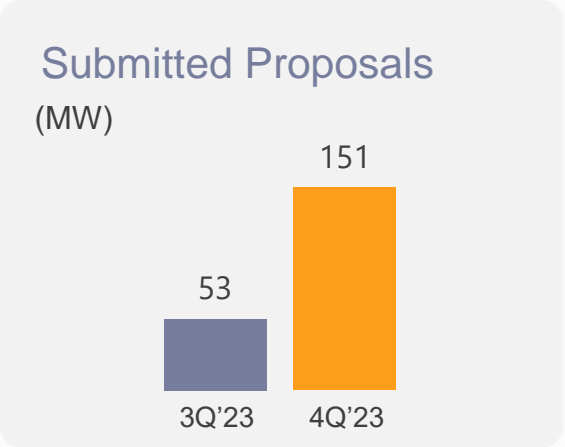
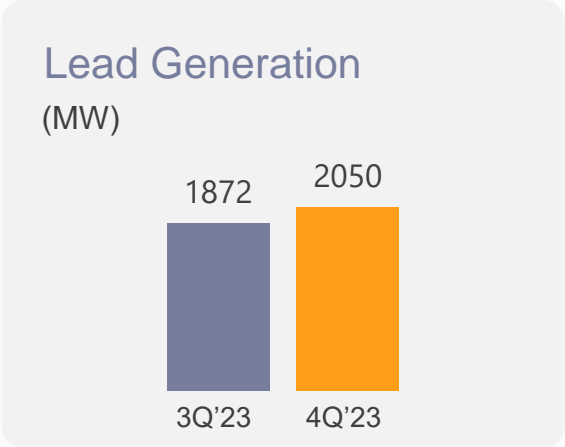


# Current Commercial Activity



<sup>1</sup> FID = Final Investment Decision

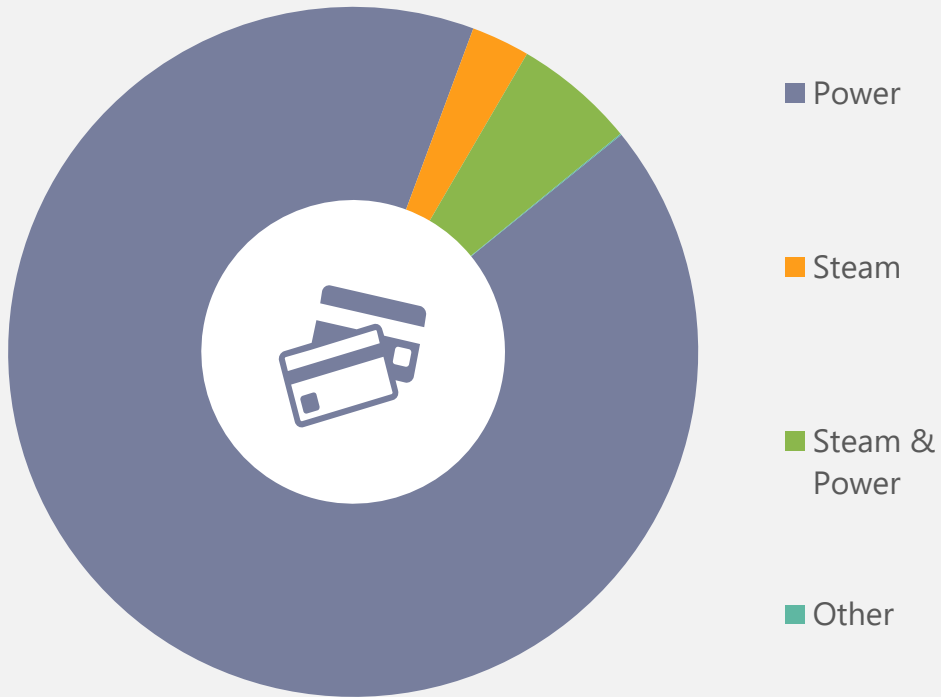
# Sales Pipeline Continues to Advance



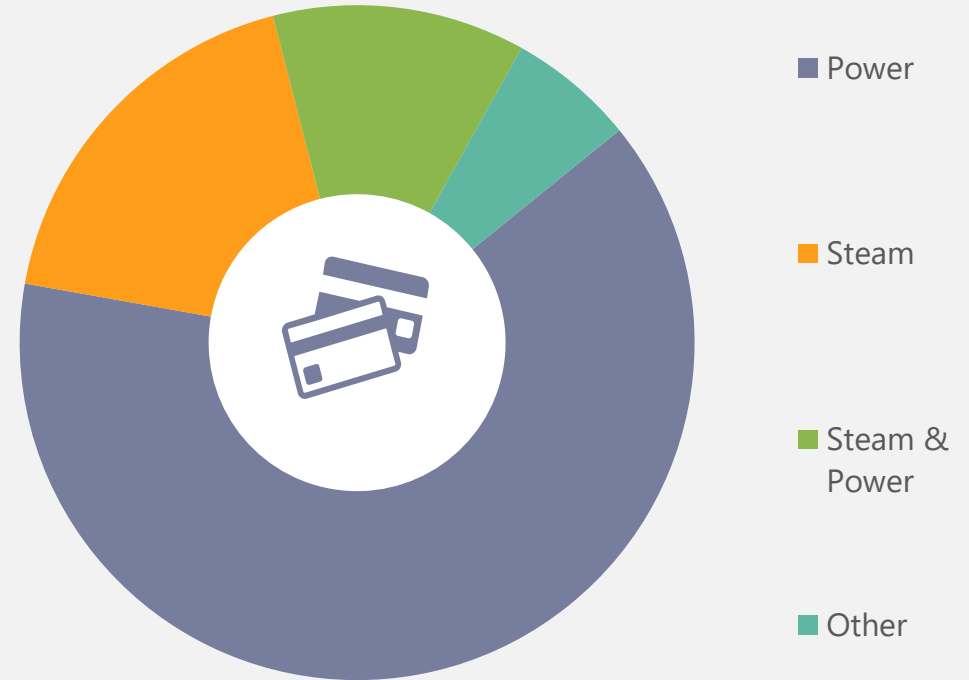


# Hybrid Power Product Demand Remains Robust

PRODUCT (BY MW)



PRODUCT (BY PROJECT)



# Targeted Actions to Advance and Scale in 2024

## Grow Revenue Backlog



- Hybrid power offering leverages highest technical readiness with competitive LCOE
- Continue securing and executing engineering design contracts
- Partner with developers

## Progress Performance Guarantees



- Gather additional operating data from demonstration scale facility in Lancaster
- Execute next phase of work under contracts with insurance providers
- Upon completion of TX project, augment demo-scale data with commercial-scale

## Improve Project Capella Economics



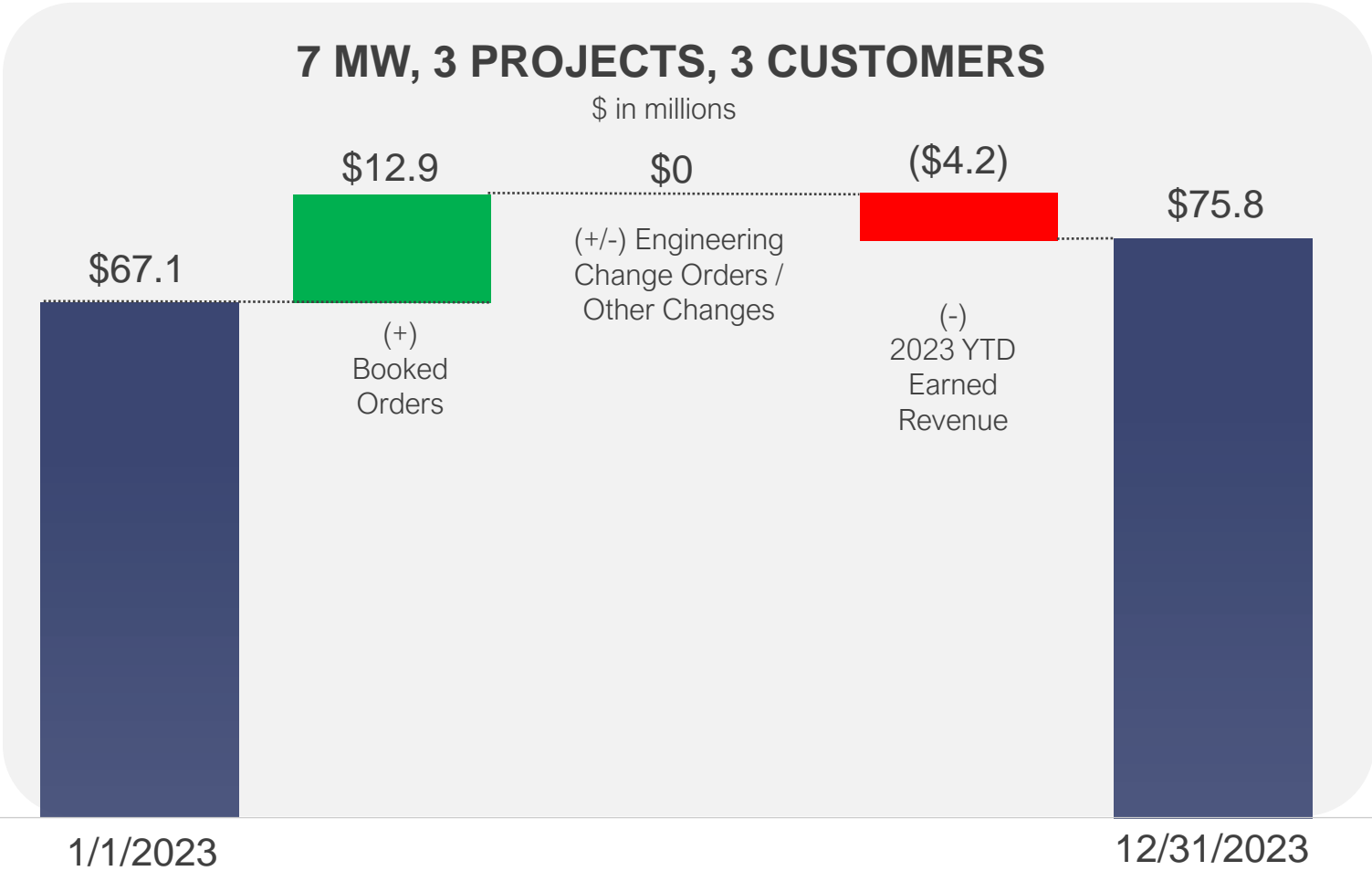
- Conduct value engineering work to simplify design while maintaining core objectives
- Secure additional third-party funding in support of novel clean energy technology
- Update roadmap toward fully commercialized Gen 3 offering

## Extend Liquidity / Growth Capital



- Exploring all available options
- Continued efforts to reduce cost structure
- Simplify organization's focus to drive tangible, immediate results

# \$76MM in Contracted Revenue Backlog<sup>1</sup>



- Turnkey Customer Centric Facility
  - + \$62.7MM Green Energy production (Capella) in partnership with Woodside Energy (\$45MM) and DOE (\$35MM)
- Dimensional Energy
  - + \$0.4MM partnership to develop sustainable aviation fuel
- Hydrogen Project
  - + \$1.6MM engineering services agreement to progress Brenda hydrogen project
  
- What's Not Included in Backlog
  - + \$4.1MM DOE Calcination
  - + Up to \$5MM engineering services agreement with NantG Power
  - + Estimated project cost to design, build, and operate a high-capacity factor steam product ("24/7 Steam") at small commercial scale in West Texas

<sup>1</sup> Contracted revenue backlog represents contracted revenue with customers and government entities we expect to realize for the construction of facilities, engineering services agreements, operating agreements, and products delivered under purchase agreements.

# 4Q 2023 Income Statement Review

Three Months Ended		
\$ in millions	4Q 2023	3Q 2023
Revenue	\$ (1.2)	\$ 2.3
Cost of revenue	54.2	1.9
Gross profit (loss)	<b>(55.4)</b>	<b>0.4</b>
Operating expenses:		
Selling, general, and administrative	13.8	15.0
Research and development	5.6	5.2
Impairment charges	6.8	-
Total operating expenses	26.2	20.2
Operating loss	(81.6)	(19.8)
Interest income, net	0.5	0.3
Gain on warrant remeasurement	0.2	0.1
Other income, net	2.1	0.8
Net loss before taxes	(78.8)	(18.6)
Benefit (provision) for income taxes	-	-
Net loss	\$ (78.8)	\$ (18.6)

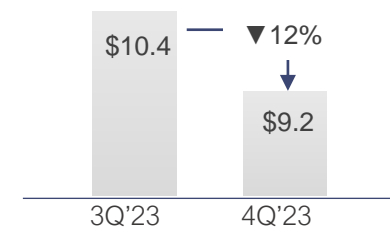
## Revenue:

- + (\$1.3)MM of project revenue from the Capella project.
- + \$0.1MM revenue from sustainable aviation fuel (SAF) project, Nant Calcination and other small projects.

Capella Project	Contract (\$ in MM)
Lifetime revenue	\$80.6
Lifetime revenue recognized	\$17.9
Backlog	\$62.7

## SG&A:

- + Adjusted SG&A<sup>1</sup> excludes non-cash SG&A expenses, Heliogen ongoing project development costs, and one-time costs.



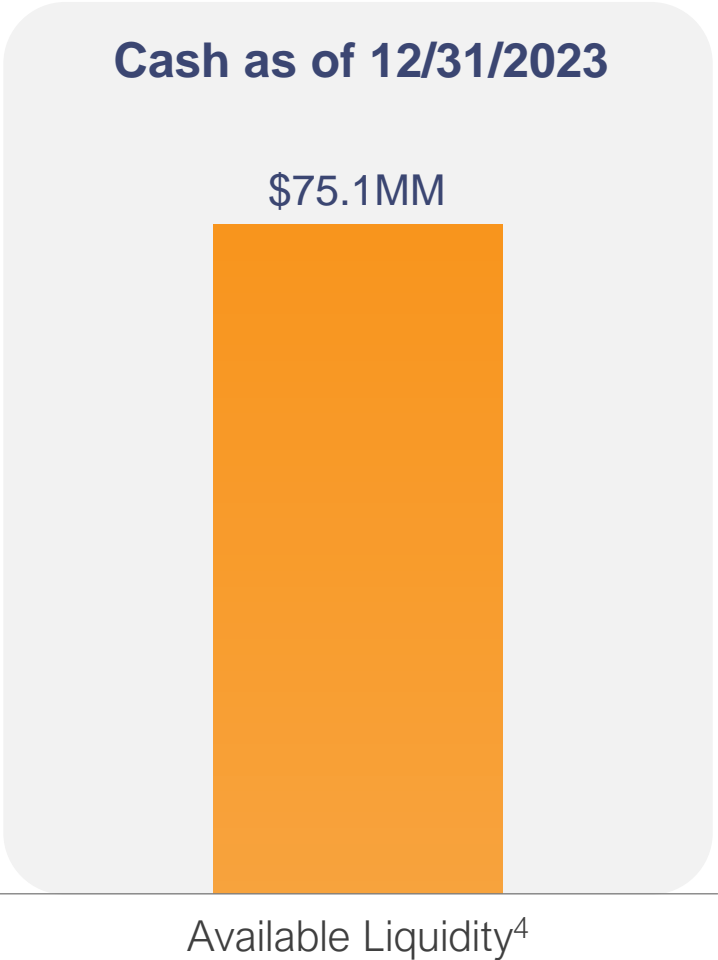
- Developed and executed \$8MM cost reduction plan in October 2023 to help fund both investment and operating needs of Heliogen

## R&D:

- + R&D includes the internal labor and third-party costs incurred to progress our product development efforts.

<sup>1</sup> Adjusted SG&A is a non-GAAP financial measure. Refer to slide 17 for non-GAAP definitions and reconciliations.

# Cash Activity



## FY 2023, Sources & Uses

\$15.5MM<sup>1</sup> Cash Collections from Customers & Partners

(\$17.5MM)<sup>2</sup> Heliogen Project Development

(\$41.8MM)<sup>3</sup> Adjusted SG&A

(\$17.8MM)<sup>3</sup> Adjusted R&D

(\$6.8MM) One-time Costs

\$0.3MM Changes in Working Capital & Restricted Cash

- Reduced headcount by 40%+ from 4Q 2022 peak to help reduce cash burn rate

<sup>1</sup> Primarily cash received from Woodside and US Department of Energy for Capella Project

<sup>2</sup> Includes labor and materials allocated to Heliogen's ongoing projects

<sup>3</sup> Adjusted SG&A and Adjusted R&D are non-GAAP financial measures. Refer to slide 17 for non-GAAP definitions and reconciliations.

<sup>4</sup> Includes \$62.7MM of cash and cash equivalents and \$12.4MM of investments

# Recap

**Our mission remains unchanged: To decarbonize industry with our breakthrough concentrating solar energy technology**



Following our critical progress in 2023, priorities for 2024 are to:

- ❖ Grow revenue backlog by:
  - ❖ Continuing to advance and market our CSP-PV hybrid offering
  - ❖ Establishing basis for a performance guarantee for our technology
- ❖ Implement the Capella project net cost reduction efforts through:
  - ❖ Value engineering
  - ❖ Additional third-party funding sources
- ❖ Execute actions to add growth capital, including exploring strategic alternatives; this effort will be bolstered by:
  - ❖ Our retained financial advisor to support the strategic review process
  - ❖ Our fully-funded 2024 operating plan, with further cost reductions and efficiency improvements underway

# Appendix

# Capella Estimate Change: Financial Statement Impact

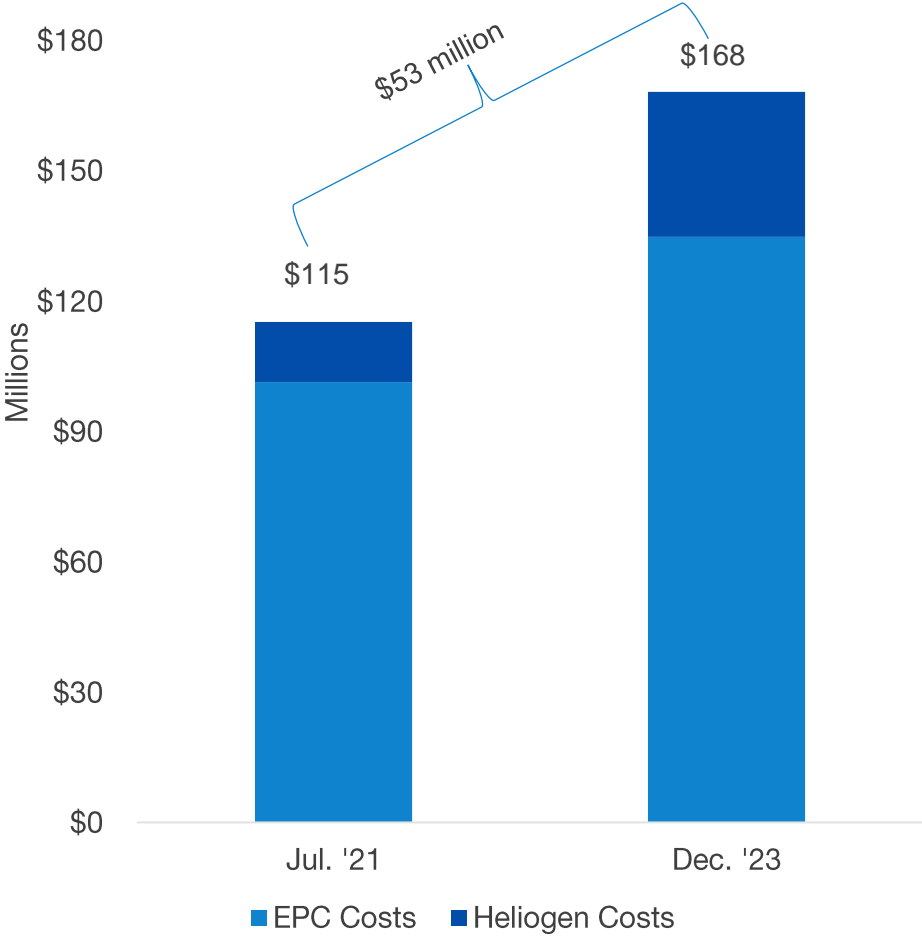
## Efforts Underway to Reduce Net Loss

- Value Engineering efforts are underway to refine project design and reduce costs:
  - Reduced building scope
  - Utilize less-expensive materials to build for shorter useful life
- Secure additional funding through federal and state government incentive programs

## Financial Statement Impacts

- After receiving recent updated project cost estimate showing a \$53 million cost increase from July 2021 to December 2023, additional non-cash expense (\$53 million) was recognized during 4Q 2023
- These impacts in 4Q 2023 were non-cash and did not impact Heliogen’s current liquidity
  - Income statement impact:
    - Contract loss provision: ~\$53 million recognized in Cost of revenue
    - Revenue: Unfavorable cumulative adjustment of \$3.4 million driven by percent-of-completion revenue recognition methodology
  - Balance sheet impact:
    - Contract loss provisions liability increased by ~\$53 million
  - Cash flow statement: No impact
- Cost estimates for Capella are subject to further refinement as Heliogen continues value engineering, exploring additional cost saving opportunities and continues to progress and negotiate an executable engineering, procurement and construction (“EPC”) contract

## Capella Estimate Change





# Non-GAAP Financial Information

Management uses certain financial measures, including Adjusted SG&A and Adjusted R&D, to evaluate our financial and operating performance that are calculated and presented on the basis of methodologies other than in accordance with generally accepted accounting principles in the United States of America ("GAAP"). We believe these non-GAAP financial measures are useful to investors and analysts to assess our ongoing financial performance because they provide improved comparability between periods through the exclusion of certain items that we believe are not indicative of our core operating performance, enhance the overall understanding of our past financial performance and future prospects, and remove items that may obscure our underlying business results and trends. These measures should not be considered a substitute for, or superior to, measures of financial performance prepared in accordance with GAAP, and our calculations thereof may not be comparable to similarly titled measures reported by other companies.

We define Adjusted SG&A as selling, general and administrative ("SG&A") adjusted for non-cash SG&A expenses, ongoing project costs and certain significant one-time items that management believes are not attributable to or indicative of our on-going operations or that may obscure our underlying results and trends. We define Adjusted R&D as research and development ("R&D") adjusted for non-cash share-based compensation and ongoing project costs.

## Reconciliations of Adjusted SG&A and Adjusted R&D

\$ in millions	2023	4Q 2023	3Q 2023
<b>SG&amp;A</b>	<b>\$ 50.6</b>	<b>\$ 13.8</b>	<b>\$ 15.0</b>

Less:

Depreciation and amortization	(1.9)	(0.3)	(0.4)
Share-based compensation	6.5	(0.9)	(0.1)
Collaboration Warrants	(2.0)	(0.5)	(0.5)
Project spend	(4.6)	(1.5)	(1.8)
One-time costs	(6.8)	(1.4)	(1.8)
<b>Adjusted SG&amp;A</b>	<b>\$ 41.8</b>	<b>\$ 9.2</b>	<b>\$ 10.4</b>

<b>R&amp;D</b>	<b>\$ 21.0</b>	<b>\$ 5.6</b>	<b>\$ 5.2</b>
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Less:

Share-based compensation	(0.7)	0.1	0.1
Project spend	(2.5)	(0.3)	(0.2)
<b>Adjusted R&amp;D</b>	<b>\$ 17.8</b>	<b>\$ 5.4</b>	<b>\$ 5.1</b>