This webinar will be recorded.

American-Made Challenges

Geothermal Geophone Prize

Phase 2 Informational Webinar

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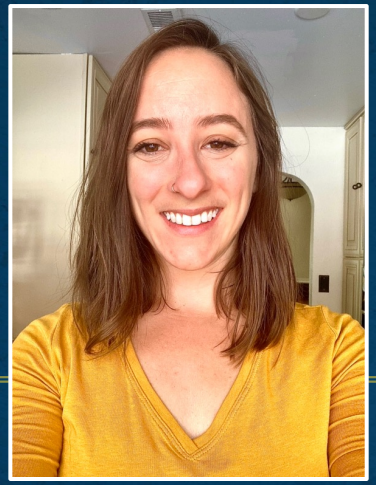

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Agenda

1. Next Steps for Phase 1
2. Vouchers
3. Phase 2 Overview
4. Submission Elements and Scoring
5. Next Steps
6. Q & A

Congratulations!

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Phase 1 Next Steps & Payments

1. You should have received an email from geophoneprize@nrel.gov with:
   - Prize Acceptance Form, W9, and ACH form
   - Voucher Acceptance Form
   - Competitors Digest
   - Reviewer Comments
   - Engagement Toolkit

2. **By December 14** please be sure to return the Voucher Acceptance Form

3. **December 16** please be sure to return the Prize Acceptance Form, W9, and ACH form

Please read all Competitor Digests in detail

Voucher Overview

How to use the $75,000 voucher as part of the Phase 1 award

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Vouchers Next Steps

Phase 1 finalists were awarded $75,000 in voucher funds to be utilized at a national laboratory

1. Return Voucher Acceptance Form (the earlier you submit, the earlier we can move the process forward with utilizing your voucher)

2. You will receive an email with:

- The contact information of the Principal Investigator (PI) who will be working with you directly to help you utilize your voucher
- Next steps to complete your Statement of Work (SOW) with a national laboratory

3. A Cooperative Research and Development Agreement (CRADA) or an external lab contract will be put in place once the SOW is finalized

4. Teams will work with national laboratories to utilize their vouchers

Vouchers Timeline

- By COB December 14: Return Voucher Acceptance Form
- Week of Dec 19: expect email with the information of your Principal Investigator (PI) and next steps for putting together a Statement of Work (SOW)
- **By January 12: Teams submit their SOW**
- CRADA or contract is finalized
- Teams work with national labs and with their team toward the next phase deadline
- October 1, 2023: Phase 2 Submission Deadline

Phase 2 Overview

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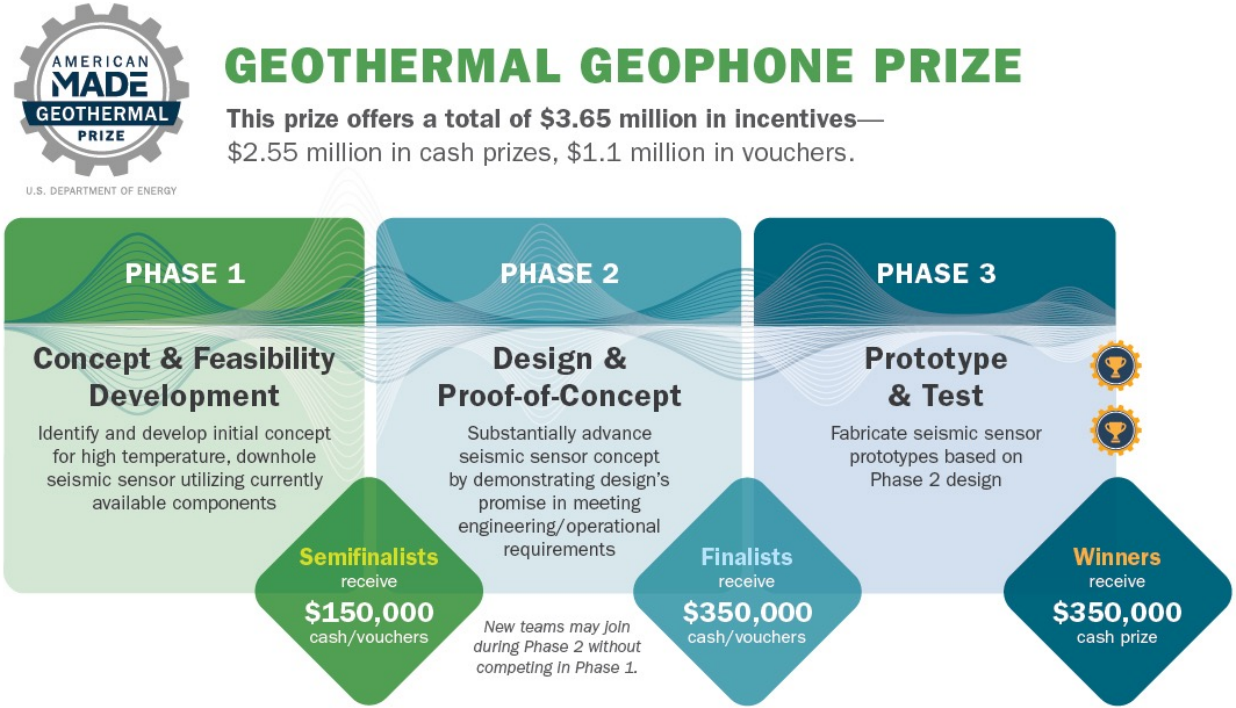
Phases & Prizes



Phase 2

Participants will work to substantially advance their seismic sensor concept by demonstrating their design's promise in meeting engineering and operational requirements outlined by the team.

Additionally, it is expected that competitors make significant progress in teaming and partnerships capable of building and testing a functioning initial prototype bench-tested under specified temperature and pressure conditions (specified in the Official Rules).

Phase 2: Up to five winners will receive $250,000 in cash and $100,000 in National Laboratory vouchers.

Lawrence Berkeley National Laboratory (LBNL)

- Phase 1 winners competing in Phase 2 will have the opportunity to receive concept design feedback in one-on-one (time-limited) sessions with LBNL experts.

- Phase 2 competitors who did not participate in the Phase 1 Contest (or who did participate but did not win) are not eligible to receive LBNL design consultation.

Phase 2

Submission Elements Overview

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Read the Rules

Official rules for the
Geophone Prize
are available online.

Geophone HeroX Page → Resources Tab

https://www.herox.com/GeophonePrize

Important Dates

Phase 2

- December 2, 2022: Phase 2 Opens
- **October 1, 2023: Phase 2 Submission Deadline**
- December 2023: Geothermal Geophone Prize Phase 2 Winners Announced

Submission Package

- Up to 120-second video (to be made public, not scored)
- Cover page content (to be made public, not scored)
- One PowerPoint slide (to be made public, not scored)
- Voucher Work Slide (to be made public, not scored)
- Technical narrative about the innovation, team, and plan (not public, scored)
- Letters of commitment or support (optional).

Required ☑
Scored ☒
Public ☑

Cover Page

- Project name
- Innovative tagline (e.g., your mission in a few words)
- Link to your 120-second video online
- Key project members (name, contacts, and links to their LinkedIn profiles)
- Keywords that best describe your solution (e.g., components, equipment)
- Your city and state
- The Connectors (up to 3) that significantly helped you advance your solution and the major items that helped with (if applicable)
- Other partners (if any)

Required ☑
Scored ☒
Public ☑

Summary Slide

Make your own public-facing one-slide submission summary that contains technically specific details but can be understood by most people.

There is no template, so feel free to present the information as you see fit.

Please make any text readable in a standard printout and conference room projection.

Required ☑
Scored ☒
Public ☑

Video

Online Public Video—What is your innovation	
Suggested content you provide • How you and your team have been tackling the seismometer challenge. • How you are incorporating advances in the high-temperature componentry space into your solution and why it is transformational • Who you are and why you have a competitive edge • Creative content that conveys your submission in exciting and interesting ways.	**Required submission format** • Ensure that your video is posted publicly online (e.g., YouTube, Vimeo) • The video should not exceed 120 seconds.
• **The American-Made Network may be able to help you with creating your video.**	

Required ☑
Scored ☑
Public ☒

Technical Narrative

Narrative	
Question 1: *Innovation*—What is your design solution and why will it be successful?	
Suggested content you provide • Describe your innovation's unique value proposition. • Describe your advanced design approach and results; provide documentation of the proof-of-concept design. • Describe how your team has advanced the sensor design and testing of components. • Provide a list of critical components that are hard to acquire or may not be commercially available. • Describe updated analysis to support how your solution will lead to reliable indefinite deployment in high-temperature environments while collecting high-resolution seismic data (according to specification in Section 3) using high-temperature seismometers.	Each statement scored on a 1–6 scale • The design represents an innovative approach, built on reasonable assumptions, valid technical foundations, and lessons learned from other notable efforts in this space. • The design approach(es) undertaken in Phase 1 is(are) reasonably ambitious, and submitted documentation validates critical assumptions needed to advance the proposed solution toward prototyping. • The competitor provides compelling analysis and bench-scale testing that supports the efficacy of their proposed design to overcome critical failure points of seismic sensors deployed indefinitely at high temperature. • Performance improvement goals and metrics are verifiable, and aggressive but attainable.

TIPS & TRICKS

- ✓ Remember your audience
- ✓ Be specific (this portion isn't public)
- ✓ Pay attention to the word count

Required ☑
Scored ☑
Public ☒

Technical Narrative

Question 2: *Team*—What have you done to date and what qualities give you a competitive edge?	
Suggested content you provide	Each statement scored on a 1–6 scale
• Introduce your team, explain how it came together (including updates as applicable if the team participated in the Phase 1 contest), and highlight the knowledge and skills that make it uniquely capable of achieving success. • Highlight your team's experiences in this competition and in high-temperature tool and/or seismic sensor development and how you have applied this to your specific innovation. • Describe why your team is passionate about your proposed solution. • Explain why winning the Phase 2 Contest will substantively change the likely outcome for the proposed solution. • Describe your efforts to undertake rigorous design processes, highlighting key engagements, relationships, and milestones.	• The team's experience and track record demonstrate notable entrepreneurial qualities such as adaptability, creativity, decisiveness, and resourcefulness. • The team's drive, knowledge, and complementary skill sets provide a strong competitive edge toward realizing this solution in the near future. • Winning the Phase 2 Contest will significantly increase the team's chances of creating a viable high-temperature capable seismic sensor prototype. • A considerable amount of high-quality effort was put into defining and advancing the design of the proposed solution.

Required ☑
Scored ☑
Public ☒

Technical Narrative

Question 3: *Plan*—What is your plan to achieve your goals?	

Suggested content you provide
• Describe where you stand in your high-temperature seismometer solution's design development (see special instructions below).
  ○ For Phase 1 winners, provide the goals submitted in the Phase 1 Contest submission package and describe the actual outcomes to date. Update goals for the Phase 3 Contests, including the Phase 3 Demo Day (based on the schedule listed in Section 1.5).
  ○ For Phase 2 competitors who did not compete in Phase 1, define goals for Phase 3 Contests, including the Phase 3 Demo Day (based on the schedule listed in Section 1.5).
• Describe your team's readiness to meet your goals; what resources provided by the contest will help meet your goals?
• Provide a high-level budget and project management plan to meet your goals through conclusion of the Phase 3 Contest, including how you will leverage program resources or other entities (include references to letters of support/commitment if applicable).
	Each statement scored on a 1–6 scale
	• The stated goals are ambitious, reduce risks, and show a commitment to an accelerated development.
	• The competitors are successfully meeting prior goals and demonstrating continued critical design progress toward prototyping their innovation.
	• Stated Phase 3 Contest goals, including the Phase 3 Demo Day goals, are ambitious, risk-reducing, and show a commitment to an accelerated solution development.
	• Meeting the stated goals will demonstrate critical progress toward fabricating, testing, and validating the functionality of this proposed design.
	• The proposed plan is appropriate and logical in order to achieve the stated goals.
	• The proposed plan effectively uses resources available in-house or through this program to advance the innovation.

Special Instructions for Question 1 & 3

- Benchtop testing results showing performance results of a 1-month test at a minimum temperature of 225°C are required to demonstrate the performance of critical design components. Data should be provided to demonstrate component performance at temperature. For example, this could demonstrate the difference in performance from room temperature versus 225°C or changes in function over time at high temperature.

- Performance criteria can discuss planned improvements for tool, component, or equipment functionality and reductions in cost and manufacturing lead times, among other improvements as compared to the state of the art. All criteria cited should reflect input from international standards (e.g., ISO), peer-reviewed literature, or other verifiable benchmarking methods.

Required ☑
Scored ☒
Public ☒

Voucher Work Slide

Describe how you will use your voucher funds, including the entities you plan to engage and what they will do with the voucher funds. Provide one slide per entity you plan to engage.

Required ☒
Scored ☒
Public ☒

Letter of Support (optional)

- Attach one-page letters (of support, intent, or commitment) from other relevant entities (e.g., potential users of the proposed innovation) to provide context
- Letters of support from partners or others that are critical to the success of your proposed solution will likely increase your score
- General letters of support from parties that are not critical to the execution of your solution will likely not factor into your score
- Please limit letters of support to one page each.

Phase 2

Find Support

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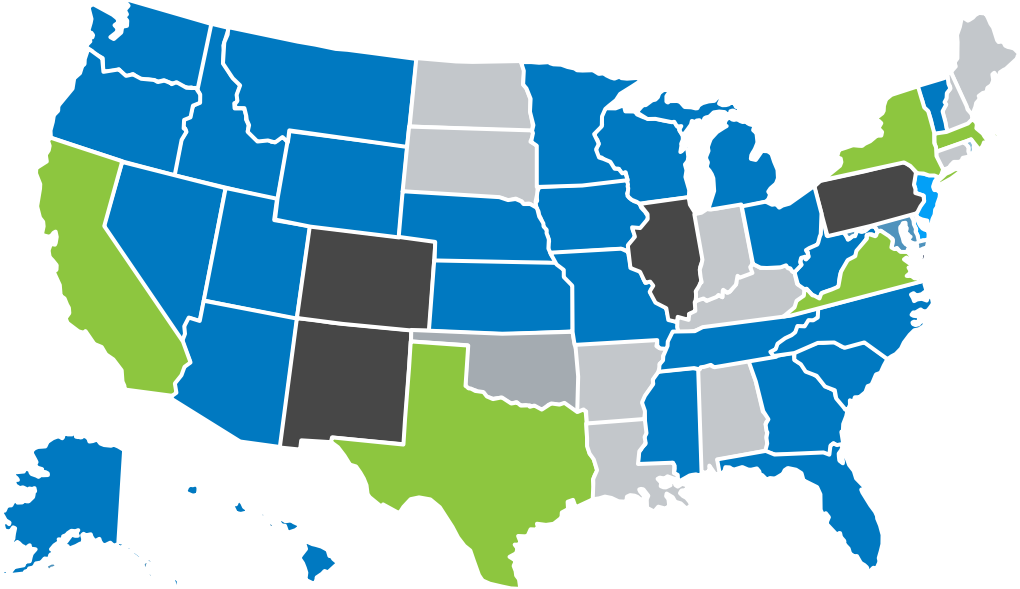
American-Made NETWORK



None 1-5 6-10 10+

300+ Connectors

- Outreach
- Recruiting innovators and Connectors
- Mentoring
- Technical support
- Business support
- Financial support

Connectors

Connectors are entities capable of helping competitors navigate the innovation process and provide support throughout the competition.

Connectors help competitors win by performing support activities such as:

- Helping competitors connect with design and prototyping experts and facilities, as well as mentors and relevant industry partners
- Providing in-kind resources, tools, and facilities to fabricate, test, and prototype high-temperature seismometer solutions.

Network Matching Tool

AmericanMadeChallenges.Org

- Helps innovators:
  - Increase the quality and speed of matches with Network members
  - Bridge the gap between what innovators need and what Connectors offer
- Helps Network members:
  - Access new clients and business development opportunities
  - Understand the needs and challenges of innovators
- Helps all parties improve the utilization of program incentives and other benefits.

How Connectors are Rewarded

Recognition Reward Name	Anticipated Number of Awards	Dollar Amounts	Details
Mobilize	Up to 1 per winning Phase 1 competitor (8 competitors)	$40,000 pool; $5,000 per competitor	Distributed to Connectors for recruiting or mentoring a winning competitor in in the Phase 1 Contest.
Phase 2 Mentor	Up to 1 per winning Phase 2 competitor (5 competitors)	$37,500 pool; $7,500 per competitor	Distributed to Connectors for mentoring a winning competitor in Phase 3 of the prize.
Phase 3 Mentor	Up to 1 per non-winning Phase 3 competitor (3 competitors)	$22,500 pool; $7,500 per competitor	Distributed to Connectors for mentoring a team who competed in but did not win Phase 3.
	Up to 1 per winning Phase 3 competitor (2 competitors)	$25,000 pool; $12,500 per competitor	Distributed to Connectors for mentoring a winning competitor in Phase 3 of the prize.

Please include connectors you worked with on your application

Phase 2

How We Score

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Expert Reviewers

- ✓ An expert panel of reviewers organized by DOE and the Prize Administrator will review proposals and provide numeric assessments for each submission element considering the review criteria for that element
- ✓ The reviewers cannot have personal or financial interests in, or be an employee, officer, director, or agent of any entity that is a registered competitor in this phase; or have a familial or financial relationship with an individual who is part of a registered team
- ✓ Expert Reviewers will sign a Non-Disclosure Agreement.

Scoring

- ✓ **Scoring Weight:** Each review criteria bullet for the Technical Narrative submission questions has equal weight. The score from an individual reviewer for the Technical Narrative will be the total sum of the scores for all bullets. All reviewers' scores will then be averaged for a final score for the submission package. Each criteria will be scored on a scale from 1 to 6.
- ✓ **Final Determination of Winners:** The Director of GTO will be the judge of the competition and will make the final determination of Phase 2 winners. This determination will take into account reviewer scores, any interview findings, and program policy factors.

What's Next?

1. Submit Voucher Acceptance Form by COB, December 14
2. Submit paperwork for cash prize payment by December 16
3. Begin draft SOW/ JSW with PI
4. Submit SOW/JSW by January 12
5. Begin work on Phase 2!
5. Apply to Phase 2 on HeroX by October 1, 2023

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Thank you!

Questions?

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Email: Geophoneprize@nrel.gov