HelioCon

Request for Proposals Information

Webinar

Oct. 10, 2022

U.S. Department of Energy
HelioCon
Heliostat Consortium for Concentrating Solar-Thermal Power

Housekeeping

- This webinar is being recorded.
- A link to a recording will be made available later today.
- Audio issues?
  - Try switching from computer to phone audio
  - If problems persist, contact Patrick Hayes via direct message in the ZOOM chat

Introduction to Webinar

Margaret Gordon

Introduction to Webinar

- Thank you for attending live or asynchronously
- Supported by the U.S. Department of Energy Solar Energy Technologies Office
- Find more information on the web:
  https://www.energy.gov/eere/solar/heliocon
- Submit questions in chat box or to HelioCon.RFP@nrel.gov – Please do not contact NREL or Sandia Personnel directly.
- Q &A will be answered in writing and made available to all.
- Questions received by Oct. 14, 2022 will be answered in an RFP modification and posted to beta.sam.gov

Agenda

- Program Overview and Goals
- Due dates for RFP
- Who is eligible to propose
- How to propose and what submittals are required
- Best Value Procurement Process
- Evaluation Criteria

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- **Program Overview and Goals**
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Program Overview and Goals

Margaret Gordon

U.S. Department of Energy
HelioCon
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HelioCon Mission:

- Establish strategic core testing and modeling capabilities and infrastructure at national labs;
- Support heliostat technology development in relevant industries
- Serve as a central repository to integrate industry, academia, and other stakeholders for heliostat technology research, development, validation, and deployment.

RFP Goals

Projects supported by this Request for Proposals will focus on:

- lowering the cost of heliostats and heliostat technologies
- improving technical performance and reliability
- creating new market opportunities for the heliostat industry

Successful proposals to this RFP will address the critical gaps identified by industry members, stakeholders, and suppliers in the HelioCon Roadmap report. NREL will seek to select high-impact projects that are strategic in time, that use or enhance lab capabilities, and that establish a basis for future years.

RFP Topic Areas

Topic 1: Advanced Manufacturing

- The development of a mirror array fabrication process that delivers high optical precision, high reflectivity, high stiffness, low weight, efficient manufacturing, and low cost.
- The development of an improved design and fabrication process for heliostat supporting structures, achieving high rigidity, reduced cost, efficient fabrication and reduced weight.

Topic 2: Metrology and Standards

- The development of new opto-mechanical quality assurance tools for mass production (may be specific to individual specific mass production line).
- The development of new opto-mechanical quality calibration after installation that will provide quality assurance of an installed heliostat fields to achieve the target performance at the design point.
- The development of a new receiver flux quality real-time assurance tool.

RFP Topic Areas

Topic 3: Components and Controls

- User-defined proposals for validating new wireless control systems
- User-defined proposals for developing and validating new closed-loop controls
- Cyber security, fault tolerance, and safety proposals for wireless communications and controls to identify and address potential vulnerabilities

Topic 4: Field Deployment

- Proposals that will mitigate both actual and perceived investor and utility risk by identifying and addressing the causes of power production underperformance, reliability issues, and challenges or delays to permitting and deployment.
- Develop feasible system concepts/designs for heliostat field integration for a retrofitted or new plant for an industrial process heat application.
- Deployment cost reduction: The cost/schedule of deployment and O&M is data deficient and site specific.

RFP Topic Areas

Topic 5: Techno-Economic Analysis (TEA)

- **There are no items to address in this round of the HelioCon RFP. However,** appropriate use of TEA or life cycle assessment (LCA) or other probabilistic modeling in proposals to other topic areas is encouraged.

Topic 6: Resource, Training, and Education

- Proposals which engage students and universities in professional development opportunities. Teams should include a university and industry partner.
- Proposals targeted at curriculum development in universities and community colleges. Teams should be university led. Assistance/collaboration from HelioCon team is particularly encouraged.
- Proposals targeted at supporting plant training and hiring needs. Teams should include a commercial plant partner.
- Proposals to other topic areas are encouraged to address Resource, Training and Education needs in their project plans. Please note inclusion of internships, postdocs, creation of training content, and career development in those proposals.

More information

Please review the HelioCon RoadMap for more information

Please submit written questions to HelioCon.RFP@nrel.gov

Please contact Lab PoCs for information regarding lab capabilities
Sandia: **Margaret Gordon** ***megord@sandia.gov***
NREL: **Mark Mehos** ***mark.mehos@nrel.gov***

DETAILS OF REQUEST FOR PROPOSAL

BILL PETERS

Due Dates for RFP

• Issue Date	Sept. 20, 2022
• Webinar	October 10, 2022
• Submit Questions via email or webinar	October 14, 2022
• RFP Amendment to answer questions	October 21, 2022 (est.)
• Response due date	November 8, 2022
• Award Selection Anticipated	December 2022

Who is eligible to propose

- Offerors may include for-profit business, Educational Institutions, or non-profit businesses. Foreign entities are eligible to propose. Non-eligible entities include NREL, Sandia, U.S. Federally Funded Research and Development Centers, Federal, state or local government entities, foreign National Laboratories, and foreign Government organizations.
- Multi-investigator teams may be needed to achieve the aggressive goals set forth by the HelioCon Roadmap report. Investigators are strongly encouraged to seek and describe links and intended collaborations with existing HelioCon supported researchers along with their engagement with the Heliostat Consortium. Information about existing HelioCon research can be found at https://www.heliocon.org.
- Support from the national labs (NREL and Sandia) should be considered to assist with testing, consultation, and narrow analysis support. Support from the national labs should not constitute a joint research project. Note that NREL and Sandia will not be eligible to receive awards or subawards under this RFP, but the facilities and expertise at NREL and Sandia can be utilized to support projects. Lab scope will be negotiated upon selection to meet available resources. Please refer to Addendums A and B of the RFP on national lab capabilities and for Lab Points of Contact.

Available Funding:

- Up to **$3 million in total funding** is available to fund multiple projects solicited in this RFP pending appropriations, program direction, and go/no-go decision points. The total funding of $3 million is expected to fund 4 to 8 projects. Individual awards may vary between $250,000 and $1,500,000 total.

Contracting Organization - NREL

- NREL will be responsible for awarding all subcontracts under this Solicitation. In addition, NREL will obligate funding for all work efforts under each subcontract and payments will be sent directly from NREL to the corresponding Subcontractors.
- For Successful Awardees – NREL will Place Firm Fixed Price Subcontracts with the Prime Awardees.
  - These will NOT be cost reimbursable contracts.
  - Payments will be based on pre-negotiated Firm Fixed Price Deliverables
- 20% Cost Share (Price Participation) is required – See RFP for more details.

How to propose

- RFP at Beta.Sam.Gov. https://sam.gov/opp/1f4e4b27a2214776b66e0a14894290a4/view
- See Table in Section 9 in RFP for more detail on the following sections
- Cover Page
- Project Summary
- Project Objectives and Work Plan
- Team Composition, Capabilities
- References and Bibliography
- Resumes/CV's
- Letters of Commitment
- Proposed Deliverables, Milestone Payment Schedule
- Price/Cost Proposal
- Representations and Certifications for Subcontracts/Purchase Orders
- Conflicts of Interest Representations/Disclosure

Best Value Procurement Process

- This Solicitation shall be conducted using Best Value Selection that results in the selection of submitted proposals for potential subcontract award that is most advantageous to NREL based on the best value combination of (a) evaluated qualitative merit and (b) evaluated price of the proposals submitted.

- Best Value Selection is based on the premise that, if all proposals are of approximately equal qualitative merit, the award will be made to those with the lowest evaluated price. However, NREL will consider selecting proposals with a higher evaluated price if the offer demonstrates the difference in price is commensurate with the higher qualitative merit. Conversely, NREL will consider selecting proposals with a lower evaluated qualitative merit if the price differential between it and other proposals warrants doing so.

Evaluation Criteria

- Criterion 1: Technical Merit (70%)
- Criterion 2: Organization and Execution of Work Plan (30%)


Thank You