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

# Heliostat Consortium Seminar Series

Brought to you by the Resource, Training, and Education (RTE) topic area

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**Host:** Dr. Rebecca Mitchell

**Title:** Economies of Scale – Field Deployment Considerations to Accommodate Evolving Energy Markets

**When:** April 13th
1-2 PM MDT

**Zoom:**
https://nrel.zoomgov.com/j/1610564989?pwd=ME9HUlBFZnQ4d3lUWkdyQ3hPTGZLZz09

**Abstract:**

Field deployment is a broad topic, defined in the HelioCon project to include the sub-topic areas of site selection, field layout, supply chain, product verification, capitalization, site preparation, assembly, construction and installation, calibration, operations and maintenance, and end-of-life-cycle management. Interviews held with developers, researchers, EPCs, and utility representatives focused on the question of how to get more solar field proposals accepted. While no single consensus exists, themes emerge that explain how lessons learned from past projects including delays, permitting issues, and component failures may have negatively impacted how CSP is perceived by investors and utilities. Expert-informed commentary will be shared on (i) the posited priorities of investors and utilities, (ii) how the sub-topic areas might be focused in HelioCon to inform more adaptable and competitive responses to request for proposals (RFPs), and (iii) the opportunities for cost reductions derived from projected learning rates if the demand for future deployments becomes stable. We will conclude with an open discussion with audience members who are invited to bring forward experience and evidence to support or challenge the proposed market opportunities.

**Bio:**

Jeremy Sment is a mechanical engineer at Sandia National Labs. Jeremy focused on wind loading over heliostat fields and long-range flux mapping and calibration tools at the NSTTF for his graduate work through 2013. He rejoined the NSTTF in 2018 to support the Gen 3 particle pathway where he is focused on thermal energy storage and the handling of solid particles and commercial scale particle system integration focused on tower design and technoeconomic analysis. Jeremy joined the HelioCon effort in late 2021 and has conducted a series of interviews with industry experts to develop a high-level understanding of solar field deployments in the context of past lessons learned and current US energy market trends. Jeremy holds a Masters of Science in Mechanical Engineering at UNM.