Request for Information: Receivers and Reactors for Concentrating Solar-Thermal Power Plants and Solar Industrial Process Heat¹

Deadline for response: February 20th, 2024
Maximum Length: unspecified

Purpose: To inform the U.S. Department of Energy (DOE) Solar Energy Technologies Office (SETO) on specific research, development, and demonstration opportunities to enable near-term deployment of receivers for concentrating solar-thermal power (CSP) plants, and reactors for CSP industries.

Topics of Interest:

High Temperature Receivers for CSP applications (>650 °C)

1. Particle Receivers
   a. Falling Particle Systems Scaleup
   b. Component Risk Amelioration
   c. Balance of Plant Systems
   d. Particle Metering
   e. Centrifugal Receiver Scaleup
   f. Photovoltaic (PV) Hybridization
   g. Particle/Particulate Matter Losses
   h. Advanced Particle Receivers

2. Tower Construction

3. Gas Receivers
   a. Channeled
   b. Volumetric Air
   c. Tubular Gas

Low and High Temperature Concentrated Solar Thermal (CST) (Low<300 °C<high) for Industrial Process Heat (IPH)

1. Feasibility and Cost
2. Other Technical Concerns

Teaming and Justice

Scale Up

¹ Link to full call.

Prepared by the Federal Research Engagement Office (FREO). Please contact Dr. Moriah Locklear (moriah.locklear@asu.edu) with any questions.