

PROJECT NAME: DOE's National Solar Thermal Test Facility Operations and Maintenance

Last 5 digits of project number: 34251

Principal Investigator (PI): Joshua Christian

PI Email: jmchris@sandia.gov

CONCENTRATING SOLAR-THERMAL POWER TRACK (Core Capabilities Topic)

BACKGROUND / INDUSTRY IMPACT

This three-year project seeks to maintain the National Solar Thermal Test Facility (NSTTF) for development, testing, and application of new CSP technologies that are instrumental in advancing the state-of-the-art in support of SunShot goals. Strategic capability actions are immediately supporting the Generation 3 CSP technology projects.

PROJECT OVERVIEW / OBJECTIVES

Maintain and enhance the critical capabilities at the NSTTF to support a Safe and fully operational facility, Support the goals of DOE awardees, Testing for extended customer base, and Customer engagement.

METHODS

Capabilities Currently Active

- Heliostat field (6MW_t, 2.5MW/m²)
- Solar Tower (4 test bays)
- Solar Furnace (16kW_t, 6MW/m²)
- Solar Simulator(7.2kW_e, 1.3MW/m²)
- Optics Laboratory
- Molten salt test pots
- Falling Particle Receiver (1MW_t)

KEY OUTCOMES / MILESTONES

- Equipment is being maintained. Priority is currently being given to the Solar Furnace and Solar Tower components required for the Falling Particle G3P3 project and the High Temperature Chloride Salt Gen 3 project.
- Request For Proposal (RFP) being developed to work with the SNL Solar Tower Facility.

CONCLUSION / REMAINING RISK

Continued work with industry, government, and academia to achieve DOE goals.

Industry	Government	Academia
Agira	DOE	University of Tulsa
NRG	DOD	Boston University
HelioGen	DLR	Georgia Inst. Tech.
Solar Dynamics	FAA	U of C -San Diego
	NASA	Univ. of Arizona
	NREL	King Saud Univ.
		Australia Nat. Univ.

Please Visit csp.sandia.gov to obtain a complete listing of SAND reports and Journal Articles that are directly related to the R&D activities at the NSTTF.

National Solar Thermal Test Facility (NSTTF) utilized to support development and testing of CSP Technologies.

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