

# Nevada NSF EPSCoR Track--1 Proposal

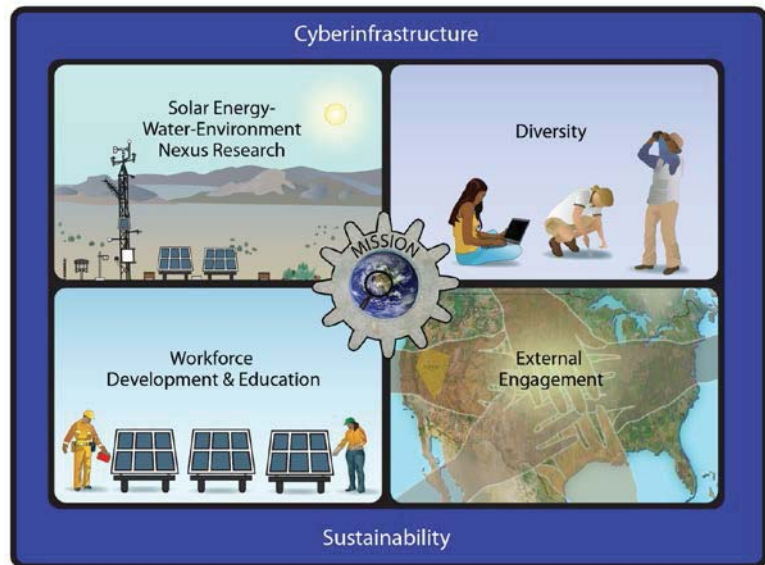
**Title:** The Solar Energy-Water-Environment Nexus in Nevada

**Duration:** 5 years (2013-2018)

**Amount:** \$20M from NSF plus \$4M cost share by NSHE

**Mission:** Advance knowledge and discovery through research on solar energy generation, its environmental impacts, and associated water issues and accelerate this research by developing new capabilities in cyberinfrastructure.

Four goals will support this mission. Development and expansion of cyberinfrastructure and long-term sustainability are embedded in each goal to promote project integration.



**Goal 1) Solar Energy-Water-Environment Nexus Research:** Advance new knowledge and discoveries in solar energy, water, and the environment.

**Goal 2) Diversity:** Develop a comprehensive approach that leads to an increase in the number of underrepresented students who graduate with STEM degrees.

**Goal 3) Workforce:** Develop a sustainable STEM workforce by creating a pipeline of STEM-trained students, educators, and workers while increasing public understanding of solar energy, water, and the environment

**Goal 4) External engagement:** Enable Nevada scientists to collaborate and develop relationships with industry, institutions, and the public to strengthen research that will support the economic development of Nevada.

**Proposed key physical, cyber, and human infrastructure:**

Physical Infrastructure	Cyberinfrastructure	Human Infrastructure
Nevada Environment, Water – Solar Testing and Research Facility (NEW-STAR)  Equipment/instrumentation for NEW-STAR and nexus research	Nevada Research Data Center (NRDC)  Web servers and data stores for NRDC Scientific software and visualization tools Network connectivity equipment for NEW-STAR and nexus research  Multi-channel video cameras, CUDA video server	5 New faculty hires  41 NSHE faculty collaborating  24 Technicians and other professional staff per year  43 Graduate students involved per year  38 Undergraduate students involved per year