NSF EPSCoR
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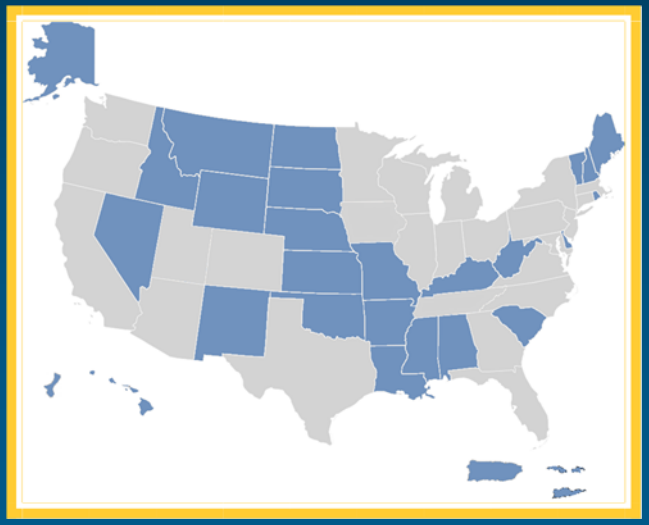
NATIONAL SCIENCE FOUNDATION

## EPSCoR Overview

The mission of EPSCoR is to advance excellence in science and engineering research and education in order to achieve sustainable increases in research, education, and training capacity and competitiveness that will enable EPSCoR jurisdictions to have increased engagement in areas supported by the NSF.

EPSCoR goals are:
a) to provide strategic programs and opportunities for EPSCoR participants that stimulate sustainable improvements in their R&D capacity and competitiveness;

b) to advance science and engineering capabilities in EPSCoR jurisdictions for discovery, innovation and overall knowledge-based prosperity.



*There are 25 States, 1 Commonwealth, and 2 Territories eligible to participate in various aspects of EPSCoR.*

# Did you know?

**EPSCoR jurisdictions contain:**

- 23% of the total U.S. population
- 27% of the nation's research institutions
- 17% of the nation's employed scientists and engineers
- 24% of the nation's African Americans
- 40% of the nation's American Indians and Alaskan Natives
- 49% of the nation's Native Hawaiians and Pacific Islanders
- 16% of the nation's Hispanics
- 50% of Historically Black Colleges and Universities
- 29% of Hispanic Serving Institutions
- 68% of the Tribal Colleges and Universities in the U.S.

(Based on 2010 Census data)

NSF 14-61

# Experimental Program to Stimulate Competitive Research EPSCoR

*NSF: Where Discoveries Begin*

# EPSCoR Objectives

- **Catalyze** the development of research capabilities and the creation of new knowledge that expands jurisdictions' contributions to scientific discovery, innovation, learning, and knowledge-based prosperity.

EPSCoR-supported researchers from U. Arkansas have developed methods to increase solar panel efficiency while reducing production costs. Their startup company, Picasolar, won the 2013 MIT Clean Energy prize for this novel technology by improving silicon solar cell efficiency by 15 %.

- **Broaden** direct participation of diverse individuals, institutions, and organizations in the project's science and engineering research and education initiatives.

- **Establish** sustainable STEM education, training, and professional development pathways that advance jurisdiction-identified research areas and workforce development.

New Mexico EPSCoR has had success in hosting post-doctoral leadership workshops, which utilize interactive approaches to develop leadership skills for academic professional success.

- **Effect** sustainable engagement of project participants and partners, the jurisdiction, the national research community, and the general public through data-sharing, communication, outreach, and dissemination.

- **Impact** research, education, and economic development beyond the project at academic, government, and private sector levels.

# Research Infrastructure Improvement Program (RII)

*The RII program uses several different investment strategies to support lasting improvements in a jurisdiction's academic research infrastructure to increase national competitiveness.*

## RII Track-1

Focuses on increasing research competitiveness by improving academic research infrastructure in areas of science and engineering critical to a jurisdiction's science and technology initiative or plan.

- Current solicitation: NSF 15-566
- Up to $4M per year for up to 5 years

## RII Track-2

Promotes research in common thematic areas of science, engineering, and education to a consortia of EPSCoR jurisdictions.

- Current solicitation: NSF 15-517
- Up to $1.5M per year for up to 4 years

## RII Track-3

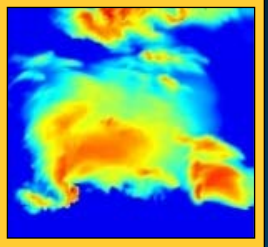
Seeks to produce novel methods to broaden the participation of underrepresented groups in STEM fields supported by NSF

- Pilot funded in FY 2013
- New solicitation pending pilot results

# Other EPSCoR Investment Strategies

**Co-funding** leverages EPSCoR investment and facilitates participation of EPSCoR scientists and engineers in Foundation-wide programs and initiatives. Co-funded proposals could not be funded without the combined, leveraged support of EPSCoR and the Research and Education Directorates.

EPSCoR co-funding of a CAREER researcher in Oklahoma has led to the development of advanced weather simulations that better predict tornado formations, allowing for more advanced warnings. Interestingly, the project uses the Kraken supercomputer, another NSF-funded award.



EPSCoR supports **workshops, conferences**, and other community-based activities designed to explore opportunities in emerging areas of science and engineering, and to share best practices in planning and implementation. EPSCoR also supports **outreach travel** that enables NSF staff from all Directorates and Offices to work with the EPSCoR research community regarding NSF opportunities, priorities, programs, and policies.

EPSCoR's communication workshop, *Becoming EPSCoR Champions*, provides jurisdictional leaders with the tools and skills necessary to more effectively tell the NSF "EPSCoR story" to a broad range of stakeholders.