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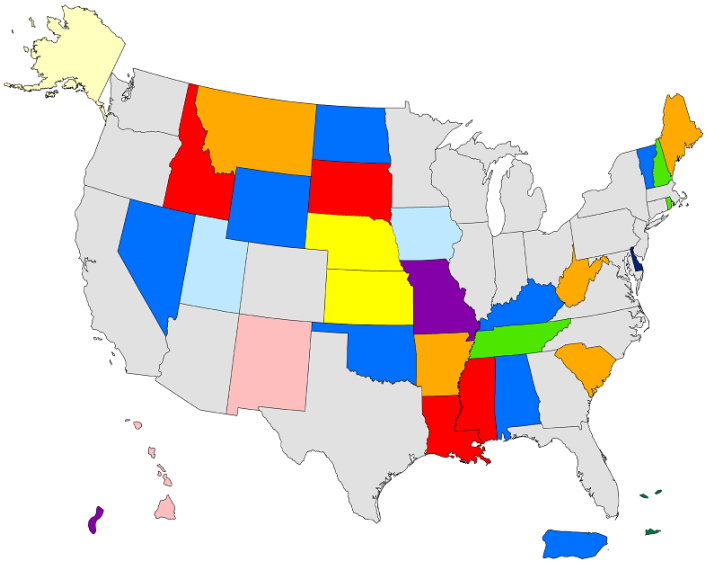
A SOUND INVESTMENT IN THE NATION'S FUTURE.

EPSCoR/IDeA foundation

EPSCoR/IDeA In Fiscal Year 2016



Prepared by: EPSCoR/IDeA Foundation
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BACKGROUND

The Experimental Program to Stimulate Competitive Research (EPSCoR) and the Institutional Development Award (IDeA) Program were established to ensure that the research universities of all states participate in federal science and technology (S&T) activities. EPSCoR/IDeA programs partner with state governments and their research universities to improve the S&T capacity of these institutions. This effort has been highly successful. In 2013, the National Academy of Sciences (NAS) completed a study of the EPSCoR and IDeA programs and concluded that: "*The Nation requires the talent, expertise, and research capabilities of all States in order to prepare sufficient numbers of scientists and engineers, remain globally competitive and support economic development.*" The NAS study also concluded that "*EPSCoR programs have enhanced the nation's human capital by strengthening research infrastructure and training many future scientists and engineers in states where, in some cases training opportunities had been scarce and largely inadequate prior to the program's arrival.*" A recent evaluation of the National Science Foundation's EPSCoR program, released by the Institute for Defense Analysis (IDA) Science and Technology Policy Institute (STPI), found that *"the EPSCoR program has contributed meaningfully to jurisdictions' increased competitiveness for NSF funds,"* and also that *"jurisdictions across all EPSCoR cohorts have developed their research bases and increased their S&E research and education programs, reaching, in certain cases, parity with non-EPSCoR jurisdictions."* The EPSCoR/IDeA states are home to more than one-fifth of the academic scientists and engineers who are engaged in research activities, account for 19 percent of academic R&D spending, produce 21 percent of all higher education S&E degrees, and are home to 22 percent of US high-technology business enterprises. One-fourth of S&E doctoral universities are located in EPSCoR states. These institutions and their faculty represent an important American asset.

EPSCoR/IDeA states' academic scientists and engineers are working on cutting edge research in energy; defense; climate change; health; transportation; homeland security; and agriculture. This research forms the base for discoveries that ultimately lead to the creation of new high tech businesses and new opportunities for the US workforce. The federal investment in EPSCoR and IDeA programs must be strengthened to ensure that the national research enterprise remains robust in all states and regions as our country works to restore and maintain its S&T supremacy in world markets.

EPSCoR or IDeA programs currently exist at five agencies: the National Institutes of Health (where IDeA is located); the National Science Foundation; the National Aeronautics and Space Administration; and the Departments of Energy and Agriculture. Agencies use rigorous merit-review processes to guide funding decisions in each of the federal agencies. States and universities that participate in these programs contribute significant funding to the EPSCoR/IDeA effort.

The EPSCoR/IDeA programs are diverse and innovative, as are the people who conduct them. All programs and researchers contribute to state and national priorities. EPSCoR and IDeA are providing focused investments in people, tools and ideas that are advancing scientific progress and catalyzing innovation across America.

Summary of EPSCoR/IDeA Programs, by Agency

Agency	Date Enacted	FY15 Enacted	FY16 Goals	# of Eligible Jurisdictions	Types of Support/Award Mechanism
NSF/EPSCoR	**1979**	**$159.69M**	**$180.0M**	**28**	♦ **Research Infrastructure Improvement Awards** ♦ **Co-Funding**
DOE/EPSCoR	**1991**	**$10M**	**$20M**	**28**	♦ **Laboratory-State Partnership Awards** ♦ **Implementation Grants** ♦ **Early Career Awards**
USDA/EPSCoR	**1991**	**$48.7M**	**15% Language**	**26**	♦ **Research Career Enhancement Awards** ♦ **Equipment Grants** ♦ **Seed Grants** ♦ **Strengthening Standard Research Project Awards**
NASA/EPSCoR	**1993**	**$18.0M**	**$25.0M**	**28**	♦ **Research Implementation Awards** ♦ **Research Infrastructure Development Awards**
NIH/IDeA	**1993**	**$273.325M**	**$310.0M**	**24**	♦ **Centers of Biomedical Research Excellence (COBRE)** ♦ **Networks of Biomedical Research Excellence (INBRE)** ♦ **IDeA Program Infrastructure for Clinical and Translational Research (IDeA-CTR)** ♦ **Co-Funding**

National Science Foundation
NSF EPSCoR

Cognizant Office

Office of Integrative Activities

Program Description

NSF EPSCoR, established in 1979, develops and makes the best use of a state's academic science and technology resources. Its goals are to: a) "provide strategic programs and opportunities for EPSCoR participants that stimulate sustainable improvements in their R&D capacity and competitiveness; and b) advance science and engineering capabilities in EPSCoR jurisdictions for discovery, innovation and overall knowledge-based prosperity." By improving research infrastructure and increasing the capability of scientists to compete for mainstream programs, NSF EPSCoR is building a high-quality, university-based research and education infrastructure, capable of supporting a strong and stable economic base into the 21st century. NSF EPSCoR works through a State Committee in each of its eligible jurisdictions.

Award Components

Current funding mechanisms - NSF EPSCoR provides funding support through the following types of awards:

- **EPSCoR Research Infrastructure Improvement (RII) Awards**
  - **RII Track-1 Awards** provide up to $4 million per year for up to five years annually to support academic research infrastructure improvements in R&D areas critical to the state's long-term S&T competitiveness and economic development. **EPSCoR states and institutions contribute additional funding (20 percent of the total NSF award). Track-1 awards are the most important investment mechanism in jurisdictions'** research infrastructure development and in maintaining their competitiveness.
  - **RII Track-2 Awards** provide up to $2 million dollars per year for up to three years to support research utilizing cyberinfrastructure. Track-2 awards are multi-jurisdictional and seek to develop regional strengths.
  - **RII Track-3 Awards** provide up to $750,000 for up to five years and focus on increasing the participation in STEM fields of underrepresented minorities in underserved rural areas of the United States.
- **EPSCoR Co-Funding**: The goal of co-funding is to accelerate movement of EPSCoR investigators into mainstream NSF research programs. Since 1998, NSF EPSCoR co-funding has enabled more than 3,000 EPSCoR researchers to win funding in the science and education programs at NSF. Co-funding allows the science, engineering, and education programs at NSF to fund more awards to researchers in EPSCoR states by providing partial EPSCoR support for proposals that have been highly rated by the merit review process but for which sufficient funding is not available through the regular process.

EPSCoR States·

28 including Puerto Rico, Guam, and the US Virgin Islands

Budget History

FY14 Enacted	*FY15 Enacted*	*FY16 Budget Request*	*FY16 Goal*
$158.19M	$159.69M	$169.99M	$180.0M

EIF Liaisons

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· Alabama, Alaska, Arkansas, Delaware, Guam, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, Puerto Rico, Rhode Island, South Carolina, South Dakota, Virgin Islands, Vermont, West Virginia, and Wyoming.

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National Institutes of Health (NIH)
Institutional Development Award (IDeA) Program

Cognizant Office

National Institute for General Medical Sciences (NIGMS)

Program Description

NIH established the Institutional Development Award (IDeA) program in 1993. IDeA – the largest of the EPSCoR-like programs – is designed to broaden the geographic distribution of NIH funding for biomedical research. As authorized by Congress, the program is intended to enhance the competitiveness for research funding of institutions located in states with historically low levels of funding and low aggregate success rates for grant applications to the NIH.

Award Components

Currently, the core components of IDeA are the: 1) Centers of Biomedical Research Excellence (COBRE) program and the 2) IDeA Networks of Biomedical Research Excellence (INBRE) program. In addition, NIGMS funds IDeA Program Infrastructure for Clinical and Translational Research (IDeA-CTR) awards. When funding is available, NIGMS co-funds awards made by other NIH Institutes and Centers (ICs) in support of investigator-initiated research project grants at institutions within IDeA-eligible states.

COBRE: The COBRE program is designed to increase the pool of well-trained investigators in the IDeA states by expanding research facilities, equipping laboratories with the latest research equipment, providing mentoring for promising candidates, and developing research faculty through support of a targeted multi-disciplinary center, led by an established, senior investigator with expertise in the research focus area of the center.

COBRE goals are to: 1) develop a thematic scientific focus in an NIH area; 2) engage an established investigator, funded by NIH, NSF or other comparable Federal or private sector source to lead the effort; 3) develop the competitiveness of 3 to 5 research projects, each supervised by a junior investigator; 4) define a plan for mentoring, career development, graduation and replacement of junior investigators; and 5) establish long-term plans for developing and sustaining the center, research program, investigators, collaborations and physical infrastructure.

INBRE (formerly BRIN): INBRE increases the pipeline of outstanding students and enhances the quality of science faculty in the IDeA states by networking research intensive and undergraduate institutions. The INBRE program prepares students for graduate and professional schools as well as careers in the biomedical sciences, supports research and mentoring of young investigators, and enhances research infrastructure at participating institutions.

INBRE goals are to: 1) develop a statewide, multi-disciplinary thematic research network of doctoral degree granting/research intensive institutions and undergraduate institutions; 2) build and increase research capacity by supporting faculty, fellows, and students at participating institutions; 3) provide undergraduate faculty and students research support, and serve as a "pipeline" to health research careers; 4) provide outreach to students at undergraduate institutions, community colleges and tribal colleges; and 5) enhance the science and technology knowledge base and the economy statewide.

IDeA-CTR: IDeA-CTR encourages applications from IDeA states to develop

infrastructure and capacity in order to conduct clinical and translational research on diseases that affect the medically underserved populations and/or the diseases prevalent in IDeA states. Furthermore, the program provides for both mentoring and career development initiatives in clinical and translational research.

Co-funding: When funding is available, NIGMS co-funds awards made by other NIH institutes and centers (ICs) in support of investigator-initiated research project grants at institutions within IDeA-eligible states. NIGMS can request that the other NIH ICs submit for IDeA co-funding consideration those applications that have already been judged meritorious by NIH peer-review committees and IC national advisory councils, but are nonetheless outside the range of applications currently under consideration for funding.

IDeA States·

23 states and Puerto Rico

Budget History

FY14 Enacted	*FY15 Enacted*	*FY16 Budget Request*	*FY16 Goal*
$273.325M	$273.325M	273.325M	$310.0M

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· Alaska, Arkansas, Delaware, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, Rhode Island, South Carolina, South Dakota, Vermont, West Virginia, Wyoming, and the Commonwealth of Puerto Rico.

Department of Energy
DOE EPSCoR

Cognizant Office

Office of Science

Program Description

The Department of Energy's Experimental Program to Stimulate Competitive Research (DOE EPSCoR) was established by Section 2203 of the Energy Policy Act of 1992 (P.L. 102-486). Positioned within the Office of Science at DOE, DOE EPSCoR assists the Office as the single largest supporter of basic research in the physical sciences in the United States by supporting basic and applied research and development across a wide range of interdisciplinary program areas including: Advanced Scientific Computing Research, Basic Energy Sciences, Biological and Environmental Research, Fusion Energy Sciences, High Energy Physics and Nuclear Physics. Through two principal funding mechanisms, Implementation Grants and EPSCoR-State/National Laboratory Partnership Grants, the goals of DOE EPSCoR are three fold: a) improve the capability of designated states and territories to conduct sustainable and nationally competitive energy-related research; b) jumpstart infrastructure development in designated states and territories through increased human and technical resources, train scientists and engineers in energy-related areas; and c) build beneficial relationships of designated states and territories with the 10 world-class laboratories managed by the Office of Science, leveraging DOE national user facilities and intellectual collaboration. Through broadened participation DOE EPSCoR seeks to provide the most comprehensive network of energy-related research across the nation. DOE EPSCoR supports an average annual budget request of approximately $8 million per year with notices for funding opportunities bi-annually.

Award Components

The program funds basic research in energy-related, programmatic areas through three mechanisms: Implementation Grants, Laboratory-Partnership Grants, and DOE Office of Science Early Career Awards.

Implementation Grants consist of three year awards of up to $2,500,000, with possible extension for another three years. Their purpose is to build capacity in areas of interest to DOE, including advanced scientific computing, basic energy sciences, biological and environmental programs, fusion energy, high energy physics and nuclear physics.

Laboratory Partnership Grants provide $200,000 per year for up to three years to allow EPSCoR researchers to work closely with the DOE national laboratories.

DOE Office of Science Early Career Awards consideration is limited to applications received from academic institutions in EPSCoR jurisdictions to the DOE Office of Science Early Career Award FOAs. The DOE Program Area/Office may nominate meritorious applications that would not have been otherwise funded for joint funding consideration with DOE EPSCoR on a funds available basis.

EPSCoR States·

28

Budget History

FY14 Enacted	*FY15 Enacted*	*FY16 Budget Request*	*FY16 Goal*
$10.0M	$10.0M	$8.52M	$20.0M

EIF Liaisons

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·Alabama, Alaska, Arkansas, Delaware, Guam, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, Puerto Rico, Rhode Island, South Carolina, South Dakota, Vermont, Virgin Islands, West Virginia, and Wyoming.

National Aeronautics and Space Administration
NASA EPSCoR

Cognizant Office

Office of Education

Program Description

NASA EPSCoR was authorized in 1993 to help develop academic research infrastructure in eligible jurisdictions that historically have not participated fully in competitive research activities at NASA including space science, earth science, and aerospace technology. NASA EPSCoR is helping states develop an academic research enterprise directed toward long-term, self-sustaining, nationally competitive capabilities. With partners from academe, industry, and state and local government, NASA's capacity building programs reach wide segments of the population. NASA EPSCoR interfaces with all four of the NASA Mission Directorates: Aeronautics, Exploration Systems, Science, and Space Operations.

Award Components

NASA EPSCoR utilizes two primary funding mechanisms: NASA Research Infrastructure Development Cooperative Agreement Awards (RID) and the EPSCoR Research CAN awards. Both components emphasize student education and involvement in research.

RID: RID awards enable jurisdictions to build and strengthen relationships with NASA researchers. Awards, which are $125,000 per year, have a three-year period of performance, with a potential single, two-year renewable continuation. A one-to-one match (cash or in-kind) is required for every NASA dollar awarded.

CAN: CAN awards address high-priority NASA research and technology development needs. Awards are up to $750,000 for a three-year performance period. A one-to-one match (cash or in-kind) is required for every NASA dollar awarded.

EPSCoR States·

28

Budget History

FY14 Enacted	*FY15 Enacted*	*FY16 Budget Request*	*FY16 Goal*
$18.0M	$18.0M	$9.0M	$25.0M

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· Alabama, Alaska, Arkansas, Delaware, Guam, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, Puerto Rico, Rhode Island, South Carolina, South Dakota, Vermont, Virgin Islands, West Virginia, and Wyoming.

United States Department of Agriculture
Strengthening Awards & EPSCoR Program

Cognizant Office

National Institute of Food and Agriculture

Program Description

The USDA Experimental Program for Stimulating Competitive Research (EPSCoR) program is designed to help institutions develop competitive research, education and extension/outreach programs in high-priority areas of national need in agriculture, food, and environmental sciences. Strengthening Awards consist of Sabbatical Grants, Equipment Grants, Seed Grants, and Strengthening Standard Project Awards. Not less than fifteen percent of the AFRI budget is set aside for strengthening awards and post-doctoral fellowships.

Award Components

Sabbatical Grants, Equipment Grants, Seed Grants, and Strengthening Standard Project Awards are available during each funding cycle to ensure that researchers at institutions and states that are underrepresented in terms of Federal research, education, and extension/outreach funding receive a portion of AFRI funds. Eligibility for all strengthening categories except Equipment grants includes (a) faculties of small and mid-sized academic institutions that are not among the most successful universities and colleges for receiving Federal funds for science and engineering research (b) Project Directors at degree-granting institutions in USDA Experimental Program for Stimulating Competitive Research (EPSCoR) states, and (c) minority serving institutions. All degree-granting institutions that are not among the most successful in receiving federal science and engineering research funds are eligible for Equipment grants.

EPSCoR remains committed to protecting a 15 percent set-aside of competitive research grant funds (Agriculture and Food Research Initiative [AFRI]) for USDA's agriculture research enhancement awards program (including USDA-EPSCoR). In addition, the President's budget includes $450 million for AFRI. This represents an increase of $125 million for agriculture research, and as a result, increased funding for the USDA EPSCoR program.

EPSCoR States[·]

- The following states and entities are eligible for FY15 USDA EPSCoR funds:

Alabama	South Carolina
Alaska	South Dakota
Arizona	Utah
Connecticut	Vermont
Idaho	Wyoming
Kentucky	
Maine	
Mississippi	American Samoa
Montana	District of Columbia
Nevada	Guam
New Hampshire	Micronesia
New Mexico	Northern Mariana Islands
North Dakota	Puerto Rico
Rhode Island	Virgin Islands

[·] Alabama, Alaska, Arizona, Connecticut, Idaho, Kentucky, Maine, Mississippi, Montana, Nevada, New Hampshire, New Mexico, North Dakota, Rhode Island, South Carolina, South Dakota, Utah, Vermont, Wyoming, American Samoa, District of Columbia, Guam, Micronesia, Northern Mariana Islands, Puerto Rico, and U.S. Virgin Islands.

Budget History

FY14 Enacted	*FY15 Enacted*	*FY16 Budget Request*	*FY16 Goal*
$31.6.M	$48.7.6M	---	15% Language $67.5M

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EPSCoR/IDeA Participating Jurisdictions, by Agency

Different states are eligible for EPSCoR/IDeA programs in each agency, based on eligibility formulas. The chart below shows which states are eligible for which EPSCoR/IDeA programs.

State	DOE	NASA	NIH	NSF	USDA
Alabama	X	X		X	X
Alaska	X	X	X	X	X
Arizona					X
Arkansas	X	X	X	X	
Connecticut					X
Delaware	X	X	X	X	
Guam	X	X		X	X
Hawaii	X	X	X	X	
Idaho	X	X	X	X	X
Kansas	X	X	X	X	
Kentucky	X	X	X	X	X
Louisiana	X	X	X	X	
Maine	X	X	X	X	X
Mississippi	X	X	X	X	X
Missouri	X	X		X	
Montana	X	X	X	X	X
Nebraska	X	X	X	X	
Nevada	X	X	X	X	X
New Hampshire	X	X	X	X	X
New Mexico	X	X	X	X	X
North Dakota	X	X	X	X	X
Oklahoma	X	X	X	X	
Puerto Rico	X	X	X	X	X
Rhode Island	X	X	X	X	X
South Carolina	X	X	X	X	X
South Dakota	X	X	X	X	X
Utah					X
Virgin Islands	X	X		X	X
Vermont	X	X	X	X	X
West Virginia	X	X	X	X	
Wyoming	X	X	X	X	X
TOTAL	28	28	24	28	26*

*In addition to the entities listed on the chart, other entities eligible for USDA EPSCoR include: American Samoa, District of Columbia, Micronesia, and the Northern Mariana Islands, bringing the total number of entities eligible to 26.