NSF EPSCoR Perspectives

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EPSCoR Head
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NSF Statistics

• FY14 NSF Funding Rate
  – Proposals received: 48,074
  – Proposals awarded: 10,981 (23%)

• FY14 Appropriations Budget: $7.17B*
  – $5.81B for Research Support
  – $846.5M for Education & Human Resources
  – $200M for Major Research Equipment
* Total includes agency operations

Administration: ~2100 staff in Arlington, VA
Mission

**NSF** - “To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense, while avoiding the undue concentration of research and education”

**IIA** – “To lead and coordinate strategic programs and opportunities that: advance research excellence and innovation; develop human and infrastructure capacity critical to the U.S. science and engineering enterprise; and promote global engagement of scientists and engineers at all career stages.”

**EPSCoR** – “To assist the NSF in its statutory function to strengthen research and education in order to achieve sustainable increases in the U.S. capacity and competitiveness that will enable and support increased engagement in areas of research and education supported by the NSF.”
**EPSCoR Goals**

- To 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
- To establish sustainable STEM education, training, and professional development pathways that advance jurisdiction-identified research areas and workforce development
- To broaden direct participation of diverse individuals, institutions, and organizations in the project’s science and engineering research and education initiatives
- To 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
- To impact research, education, and economic development beyond the project at academic, government, and private sector levels.

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**EPSCoR Overview**

- **Research-Driven State-based NSF program dedicated to:**
  - Building **sustainable capacity** of educational institutions in EPSCoR jurisdictions
  - Providing strategic programs and opportunities that stimulate sustainable improvements in R&D capacity in EPSCoR jurisdictions
  - Developing pathways for increased success in competitive programs at NSF and other research programs
- **EPSCoR jurisdictions**
  - States and Territories that are awarded ≤ 0.75% of NSF research support funding over a 3-yr window
  - Eligibility table updated annually and posted on EPSCoR website
EPSCoR Funding

EPSCoR funding represents ~2.7% of NSF’s overall research support

<table>
<thead>
<tr>
<th>Activity</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
</tr>
</thead>
<tbody>
<tr>
<td>RII</td>
<td>100.2</td>
<td>106.2</td>
<td>110.6</td>
<td>116.3</td>
<td>132.2</td>
</tr>
<tr>
<td>Co-funding</td>
<td>45.4</td>
<td>39.4</td>
<td>38.8</td>
<td>30.8</td>
<td>25.0</td>
</tr>
<tr>
<td>Outreach &amp; Workshops</td>
<td>1.5</td>
<td>1.2</td>
<td>1.5</td>
<td>0.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>147.1</td>
<td>146.8</td>
<td>150.9</td>
<td>147.6</td>
<td>158.2</td>
</tr>
</tbody>
</table>

*Amounts in $M
<table>
<thead>
<tr>
<th>Jurisdictional Cohort Year of Entry into EPSCoR</th>
<th>Initial 3 Years in EPSCoR</th>
<th>Most Recent 3 Year Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>0.3%</td>
<td>0.7%</td>
</tr>
<tr>
<td>1985</td>
<td>0.4%</td>
<td>0.7%</td>
</tr>
<tr>
<td>1987</td>
<td>0.5%</td>
<td>0.7%</td>
</tr>
<tr>
<td>1992</td>
<td>0.6%</td>
<td>0.7%</td>
</tr>
<tr>
<td>2000+</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

More detailed look at NSF EPSCoR Research Support Funding
**EPSCoR Portfolio**

- **Research Infrastructure Improvement (RII)**
  - **Track-1**: up to $4M/year for ≤ 5 years (*NSF 14-558*)
  - **Track-2**: up to $1.5M/year for ≤ 4 years; Collaborative research among jurisdictions on NSF priorities (*NSF 15-517*)
  - **Track-3**: pilot in FY13; up to $750K for ≤ 5 years; Building Diverse Communities → Broadening participation

- **Co-Funding with NSF Directorates and Offices**
  - Meritorious proposals from EPSCoR jurisdictions
  - Merit review by managing program
  - Consistent with EPSCoR criteria

- **Outreach and Workshops**
  Brings EPSCoR jurisdictions together with NSF program staff; builds mutual awareness, potential collaborations

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**Co-funding**

- **Joint support of meritorious NSF proposals**

- **Steps**
  - Proposal submittal to specific NSF Directorate/Office
  - Merit review in accordance with NSF policies
  - EPSCoR review and co-funding decision
    - Availability of funds

- **Co-funding priorities**

<table>
<thead>
<tr>
<th>New PI</th>
<th>Student involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative/Multidisciplinary</td>
<td>Synergistic with NSF investments</td>
</tr>
<tr>
<td>Broaden participation</td>
<td>Integration of research and education</td>
</tr>
</tbody>
</table>
Funding Opportunities

Where do funding opportunities come from?

- National priorities
- White House, Congress
- Societal needs (and public perception)
- Community input
- NSF Strategic Plan


Find Funding …

http://www.nsf.gov/funding/pgm_list.jsp?type=xcut

- Go to NSF home page http://www.nsf.gov
- Select “Funding” tab
- Choose: “Search Funding Opportunities” from drop down menu
EPSCoR RII Track-2 Proposals due Feb. 20, 2015

• All 28 RII eligible jurisdictions are eligible to apply
• One proposal per institution
• One proposal participation for a PI or Co-PI
• PIs and Co-PIs must be active researchers in the proposal area
• Proposals must focus on either 1) cognitive science and neuroscience, 2) clean energy, or 3) food security
• Proposals due Feb. 20, 2015
Highlights of Current NSF Opportunities

- Innovation/Entrepreneurship
- Cyber Opportunities
- Workforce Development
- International Science and Engineering

Innovation/Entrepreneurship

Incentivize R&D for startups and small businesses

- **Small Business Innovative Research (SBIR)** *(NSF 14-603)*
  - **Phase I**: $150k for 6 months—proof of concept
  - **Phase II**: $750k for 2 years—advance technology towards commercial deployment

- **Small Business Technology Transfer Research (STTR)** *(NSF 14-608)*
  - **Phase I**: $225k for 1 year: Prove technical and commercial merit of innovation
  - **Phase II**: $750k for 2 years: Develop product prototype

- **Innovation Corps (I-Corps Teams)** *(NSF 12-602)*
  Supplemental support for NSF-funded researchers to accelerate innovation that can attract subsequent third-party funding.
  Public-Private partnerships
Cyber Opportunities

• **Campus Cyberinfrastructure** – Infrastructure, Innovation & Engineering Program (CC*IIE) (NSF 15-534)
  - Data transfers: computational science, computer networks, systems research.
  - Network Integration activities for science applications and distributed research projects.

• **Cyber-Innovation for Sustainability Science and Engineering** (CyberSEES) (NSF 15-524)
  - Advance interdisciplinary research by new advances in computing
  - Computational innovation to address sustainability problems.

• **Cyberinfrastructure Framework for 21st Century Science and Engineering** (CIF21)

• **NSF eXtreme Digital (XD) program**

• **The Extreme Science and Engineering Discovery Environment** (XSEDE)

Workforce Development

• **Graduate Research Fellowship Program (GRFP)** (NSF 14-590)
  - Up to 3 Years of support for a research-based master's or doctoral degree.

• **Post-doctoral Research Fellowships, SBE** (NSF 14-595)
  - Broadening Participation (SPRF-BP)
  - Interdisciplinary Research in Behavioral and Social Sciences (SPRF-IBSS)

• **Faculty Early Career Development Program (CAREER)** (NSF 14-532) $400,000 for 5-years
  - Junior faculty teacher-scholars who demonstrate outstanding research, excellent education and the integration of education and research
    - Doctoral degree awarded before proposal deadline
    - Untenured until October 1 following the proposal deadline
    - No previous CAREER award
    - Tenure-track (or equivalent) at an accredited institution that awards degrees in a field supported by NSF or non-profit non-degree granting organization
Leveraging International Research

- International Research Experiences for Students (IRES) (NSF 12-551)
  - Globally-engaged U.S. science and engineering students
  - Open to undergraduate and graduate students
  - Active research participation by students

- Research Opportunities in Europe
  - NSF CAREER Awardees–European Research Council (ERC) ≤ 1 year—begin at least 1 yr before NSF CAREER award ends.
  - NSF Postdoctoral Research Fellows-European Research Council (ERC) ≤ 1 year—begin at least 1 yr before NSF award ends.

- Graduate Research Opportunities Worldwide (GROW)
  - Graduate Research Fellowship Program (GRFP) recipients
  - Collaboration: NSF International Partners and USAID

NSF Program Officer (Rotator) Opportunities

http://www.nsf.gov
- About NSF: Career Opp → Temporary/Rotator Programs
- About NSF: Career Opp → Job Openings: Science/Engineering/Education
- (All or specific NSF Unit)
Questions?

Useful Websites

• www.nsf.gov
• http://www.nsf.gov/funding/
• http://www.nsf.gov/od/iiia/programs/epscor/index.jsp

FY14 Reported Data
Year 5 - 0903833

25 Proposals awarded, $4.3M
• 5-yr total: 135 awards, $62.5M

30 Publications
• 5-yr total: 226 publications

138 Individuals supported

20 Institutional collaborations

6,296 participants in external engagement efforts
(Academic Res. Institutions, PUI, MSI, & K-12)
http://www.epscor.hawaii.edu/

Contact info:
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Thank-you!

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Current version of PAPPG: NSF 15-1

The EPSCoR Team

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