SD EPSCoR RII T1 Planning Grant Program

Request for Proposals

SUMMARY OF PROGRAM

The South Dakota EPSCoR Program invites proposals to organize and plan for the Research Infrastructure Improvement (RII) science and engineering Track 1 (T1) research focus area(s) that will be included in the state's NSF Research Infrastructure Improvement proposal that will be submitted in the Fall of 2013. This request for proposals consists of a required Letter of Intent and subsequent submission of the proposal.

Contacts:

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Eligibility Information:

Eligibility as a lead institution is limited to South Dakota Regental institutions that are research universities in science and/or engineering. Any South Dakota institution of higher education (4-year, 2-year, public, private or tribal) can participate as a collaborating institution.

Letters of Intent and proposals must represent a collaborative effort among at least 2 Regental institutions and any other institutions or organizations from within the state. Collaborations involving other public or private institutions in South Dakota, national laboratories or investigators from outside South Dakota are strongly encouraged. Travel funds may be requested to bring participants from outside South Dakota to the state as a part of the planning activities.

PI Eligibility Limit:

A single investigator must be designated as the project director and accept management responsibility for the grant. A project's director and lead investigators may serve on only one project.

Award Information:

- Anticipated Funding Amount: Each planning project should request $5,000 to $8,000 for an award period of six (6) months.
- Funds cannot be carried over beyond the project end date.

Proposal Preparation and Submission Instructions:

A. Proposal Preparation Instructions

- Letter of Intent: Submission of a Letter of Intent (LOI) is required. Please see the full text of this solicitation for instructions on preparing the LOI.

- Projects submitting a Letter of Intent may submit the full proposal by the deadline noted below. Please see the full text of this solicitation for instructions on preparing the proposal.

B. Budgetary Information

- Proposals should request $5,000 to $8,000 for an award period of up to one year. Funds cannot be carried over beyond the project end date.
- It is anticipated that 12-15 proposals will be funded depending on the amounts requested.

C. Due Dates

- Letter of Intent (required—due by 5 PM local time):
  - December 19, 2011
- Proposals (required--due by 5 PM local time):
  - January 12, 2012
- Awards Announced
  - February 2012
- Suggested Award End date
  - August 2012
- Next RII Track Proposal Development Process Begins
  - Fall 2012
- NSF RII Track 1 Proposal Due
  - Fall 2013

D. Proposal Review Information

- Merit Review Criteria: Standard NSF criteria will apply. An external review panel will conduct proposal reviews.
- Additional merit review considerations apply. Please see the full text of this request for further information.

E. Award Administration Information

- Award Conditions: Additional award conditions apply. Please see the full text of this solicitation for further information.
- Reporting Requirements: Standard NSF reporting requirements will apply, but reports will be submitted to the SD EPSCoR Office.

I. INTRODUCTION

South Dakota is entering the third year of its current $20 million National Science Foundation (NSF) Experimental Program to Stimulate Competitive Research (EPSCoR) Research Infrastructure Improvement (RII) Track 1 (T1) award and will be eligible to submit a new NSF RII Track 1 proposal in the Fall of 2013 based on the current submission window. This request for proposals begins the process of developing and selecting the science and engineering research focus area(s) that will form the basis of that proposal.

EPSCoR is based on the premise that universities and their faculty and students in science, technology, engineering and mathematics (STEM) fields are valuable resources that can have positive influence on a state's development in the twenty-first century in much the same way that agricultural, industrial and natural resources did during the twentieth century. EPSCoR's goal, therefore, is to identify, develop, and fully utilize a state's academic science and technology resources in a way that will support a more productive and fulfilling way of life for its citizens. To achieve this end, NSF cooperates with state leaders in government, higher education, and business to support productive long-term partnerships in support of common goals. These partnerships are designed to stimulate local action that will result in lasting improvements to the state's STEM research and educational infrastructure and increased national R&D competitiveness.

EPSCoR increases the R&D competitiveness of an eligible state through the development and use of STEM resources residing in its research, educational, and industrial institutions. While EPSCoR focuses primarily on those universities granting the state's Ph.D. degrees in STEM disciplines, effective partnerships between those universities and other institutions across the state are encouraged (e.g., predominantly undergraduate universities and colleges, two year institutions, minority-serving institutions, and local school districts). There is widespread agreement that our Nation's continued leadership in science, technology, engineering and mathematics (STEM) and the corresponding economic prosperity that it creates requires that all of its educational and private sector resources be fully employed. Therefore, to ensure full participation of all our universities and colleges in our nation's economic and scientific future, opportunities for research experiences that prepare citizens for STEM careers is essential. This is especially true in institutions that have a special role in serving groups underrepresented in STEM careers (e.g., two year colleges, large urban universities, and minority-serving institutions).

As a result of EPSCoR funding, it is expected that sustainable STEM infrastructure improvements at the state and institutional levels will be achieved, significantly increasing the movement of EPSCoR researchers into the mainstream of federal and private sector R&D support.

NSF EPSCoR RII Track 1 proposals are currently 5-year awards worth up to $4 million/year ($20 million total) and require an additional $4 million from the jurisdiction as cost share to an award. They are built around one or two STEM research and education themes.

SD EPSCoR's existing RII Track 1 award will end July 31, 2014. The state will need to submit a new proposal sometime during the Fall of 2013 based on current submission windows. This RFP provides seed funding to help groups of investigators begin to organize and develop STEM research focus areas that will compete for selection as the STEM research focus area(s) for that proposal.

II. SD EPSCoR RII T1 PLANNING GRANT PROGRAM DESCRIPTION

The purpose of a SD EPSCoR RII T1 Planning Grant is not to provide seed funding to initiate a research project. Its intent is to provide funding to allow the planning and organizational activities necessary to ensure that there will be multiple proposals competing in the down-select process that will be used to choose the STEM research focus area(s) that will be the basis for the next RII Track 1 proposal that the state submits. RII Track 1proposals have evolved into essentially NSF Center-type proposals that not only have significant research infrastructure development activities but also STEM education and outreach, economic development, workforce development, assessment and strategic planning activities. As such, their development and organization requires considerably more time and effort than that of a typical single-investigator or multi-investigator research proposal. Information on NSF center type projects is available as downloadable video and PowerPoint presentations from a workshop conducted on December 1, 2011. The video and presentations are available on the SD EPSCoR website at http://sdepscor.org/t1planninggrant_workshop.html

The purpose of the SD EPSCoR RII T1 Planning Grant program is to provide funding to allow groups of investigators to "self-organize" around research areas that are NSF strategic research priorities and South Dakota economic development and workforce development priorities. Successful SD EPSCoR RII T1 Planning Grant proposals will suggest activities that will help develop the organizational framework and research and education activities that could be included in response to a RFP that will be announced in Fall 2012 for selection of the research focus area(s) that will form the basis for the state's next NSF RII Track 1 proposal. *The SD EPSCoR RII T1 Planning Grant program (this program) will not fund research activities.*

A secondary outcome of this program is that it will provide opportunities for faculty to develop skills needed to organize and propose large interdisciplinary research projects such as a federally-funded interdisciplinary STEM research and education centers.

III. ELIGIBILITY INFORMATION

Under the current NSF EPSCoR RII T1 RFP NSF 11-565, eligibility as a lead institution is limited to South Dakota Regental institutions that are research universities. Any South Dakota institution of higher education (4-year, 2-year, public, private or tribal) can participate as a collaborating institution. In the past, NSF has expected full participation of these institutions in the infrastructure development and education/outreach activities in successful proposals. *It is strongly encouraged that the planning activities involve as broad a range of institutions as the proposed project will allow.*

Letters of Intent and proposals must represent an interdisciplinary collaboration among at least 2 doctoral granting Regental institutions. Collaborations involving other South Dakota public, private and tribal institutions of higher education are expected to be included upon completion of the planning grant. Collaborations with the private sector and national laboratories are strongly encouraged and will need to be documented as a part of the final project report.

The proposed research infrastructure development focus area must have a national and statewide impact that addresses an area that NSF has identified as one of its strategic research priorities (http://www.nsf.gov/news/strategicplan/nsfstrategicplan_2011_2016.pdf). It must be aligned with South Dakota's economic development and workforce development priority areas (http://www.sdreadytowork.com/industries.aspx). A RII T1 Planning Grant will not fund a research focus area previously or currently funded as a 2010 Research Center though proposals will be accepted that demonstrate that they have evolved from a Center(s).

A single investigator must be designated as the project director and accept management responsibility for the grant. The project director and other lead investigators may participate in only one proposal.

A Letter of Intent is a required prerequisite to submitting a proposal. To be considered in this competition, a research infrastructure development focus area must be in an NSF-fundable area.

IV. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Letter of Intent (required):

The Letter of Intent should be submitted as an e-mail to the address given in Section IV.C. The e-mail subject entry should say "SD EPSCoR RII T1 Planning Grant". The body of the e-mail must contain the following information:

- Project Title
- Project Summary (200 word maximum description of the research infrastructure area to be developed)
- Relevant NSF strategic area(s)
- Relevant SD economic development priority(ies)
- Project Director's name, contact information, and institutional affiliation

A list of all senior investigators and their affiliations should be included as one attachment to the e-mail.

Proposal Preparation Instructions:

The Project Narrative should clearly articulate how this research focus area is consistent with NSF research priorities, state economic development and workforce development goals, and how it will strengthen new or emerging doctoral graduate programs.

The project planning leadership should be provided by a small group of the senior investigators that includes the project director. The project director should be a senior scientist with demonstrated organizational, managerial, and leadership ability to lead a center-type research program. The remainder of the leadership team should be a

small group of senior investigators from the participating institutions who can make substantive contributions to the planning activities. *However, it is strongly encouraged that the planning activities involve as broad a range of investigators as is feasible.* Although a consortium of several institutions may be involved in the planning activities that are proposed, the project director must accept overall responsibility for managing the project and submitting the final report.

The proposal narrative will be limited to 3 pages, total, single-spaced. Pages should have 1-inch margins and be prepared with the Times New Roman 11 point font. Proposals not adhering to these instructions will be returned without review. (Suggested page limit guidelines are given parenthetically.)

- Cover Page with Project Title, Project Director's name, contact information, and institutional affiliation, the relevant NSF strategic area(s), and the relevant SD Economic development priority(ies) (This item is outside the 3-page limit.)
- Introduction to the research focus area including relevance to NSF and state priorities (~0.5 page)
- Description of the planning activities to be undertaken (~2 pages)
- Description of the leadership team (~0.5 page)
- References cited (no page limit and outside the 3-page limit).
- Provide the following items for the project director and each senior investigator. These items should immediately follow the references cited. (These items are outside the 3-page limit.)
    - A biographical sketch (2 pages maximum, prepared in accord with NSF GPG guidelines http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/index.jsp, 2.f 11-10
    - A list of current and pending research support for each person who provides a biographical sketch should also be included. (A template can be downloaded at www.nsf.gov/pubs/1999/nsf992/forms/99form1239.doc)

Projects are encouraged to take advantage of the AccessGrid and other web-based collaboration technologies that SD EPSCoR has put in place to minimize time and travel costs for project planning activities. Additional information on accessing this resource in South Dakota can be found at http://sdepscor.org/t1planninggrant.html.

B. Budgetary Information

Cost Sharing:

Cost sharing is not required by proposals submitted under this request.

Other Budgetary Limitations:

Proposals should request $5,000 to $8,000 for six (6) months.

Funds may be used for investigator travel costs, meeting planning costs, etc. Funds may not be used to fund research expenses.

Funding for this infrastructure development activity comes from the existing NSF EPSCoR RII Track 1 award. Indirect costs are not allowed.

Budget Preparation Instructions:

A single investigator must be designated as the project director and accept management responsibility for the planning activities. It is acceptable to budget time for the research focus area project director to reflect the time commitment involved.

The budget should be prepared as one sheet using the standard NSF template (one page). No cost-sharing or matching is required. A budget justification should describe how the funds will be spent and any additional detail that is necessary (one page). These pages are outside the 3 page limit but should be attached to the proposal following the biosketches/current & pending support forms.

C. Due Dates

Letters of Intent and proposals should be submitted electronically in PDF format as e-mail attachments to the SD EPSCoR Office by the date and time indicated below using the following e-mail address: karen.theodosopoulos@sdstate.edu:

- Letter of Intent (required—due by 5 PM local time):
  - December 19, 2011
- Proposals (required--due by 5 PM local time):
  - January 12, 2012
- Awards Announced
  - February 2012
- Suggested Award End date
  - August 2012
- Next RII Track Proposal Development Process Begins
  - Fall 2012
- NSF RII Track 1 Proposal Due
  - Fall 2013

D. Where to Submit

Letters of Intent and proposals should be submitted electronically as single documents in PDF format as attachments to an e-mail by 5:00 PM local time on their respective due dates to the SD EPSCoR Office using the following e-mail address: karen.theodosopoulos@sdstate.edu.

Hard copies will not be accepted and will be returned without review.

V. PROPOSAL REVIEW INFORMATION

A. Proposal Review Process

Proposals submitted in response to this solicitation will be reviewed and evaluated by an external panel convened on behalf of the SD EPSCoR program. Project directors will receive a written summary of the review panel's assessment of their proposal.

Proposals will be reviewed using standard NSF criteria described in the GPG (intellectual merit, broader impacts, etc.). Additional evaluation criteria that the reviewers will be asked to consider in their assessment of the proposals include:

- Is the proposed research infrastructure improvement focus area:
  - consistent with NSF's strategic research priorities?
  - consistent with state economic development and workforce development priorities?
  - interdisciplinary or transdisciplinary?
- What is the potential of the focus area to impact the state's research infrastructure?
- The nature and depth of the multi-institutional, multi-organizational interactions that the project proposes to develop.
- The stated commitment of the project leadership to participate in all required project activities.