THE UNIVERSITY OF NEW MEXICO

To: Distribution List

From: Faculty Research Development Office
Office of the Vice President for Research

Subject: Limited Competition: NSF: EPSCoR Research Infrastructure Improvement Program: Track-2 Focused EPSCoR Collaborations (RII Track-2 FEC), NSF 22-523

Date: November 19, 2021

RII Track-2 FEC builds interjurisdictional collaborative teams of EPSCoR investigators in STEM focus areas consistent with NSF priorities. Projects are investigator-driven and must include researchers from at least two EPSCoR eligible jurisdictions with complementary expertise and resources necessary to address challenges, which neither party could address as well or rapidly independently. The Science, Technology, Engineering, and Mathematics (STEM) research and education activities should seek to broaden participation through the strategic inclusion and integration of diverse individuals, institutions, and sectors throughout the project. Proposals must describe a comprehensive and integrated vision to drive discovery and build sustainable STEM capacity that exemplifies diversity of all types (individual, institutional, geographic, and disciplinary). The development of early-career faculty that are underrepresented in the chosen STEM field and the integration and inclusion of Minority Serving Institutions (MSIs) and Primarily Undergraduate Institutions (PUIs) and community colleges is a critical component of this sustainable STEM capacity . For FY 2022, RII Track-2 FEC proposals are invited on a single topic: "**Advancing research towards industries of tomorrow to ensure economic growth for EPSCoR jurisdictions**."

In FY 2022, RII Track-2 FEC proposals must be aligned with the following focus area: "**Advancing research towards industries of tomorrow to ensure economic growth for EPSCoR jurisdictions**." Catalyzing research and innovation in critical and emerging technologies that advance the nation's economic competitiveness or are vital to national security are national priorities. Participation in these industries of tomorrow will advance science and engineering, enhance the contribution of EPSCoR jurisdictions to the well-being of our nation's citizens, and promote economic growth in EPSCoR jurisdictions.

Important emerging industries include: "artificial intelligence (AI), quantum information science (QIS), advanced communications technologies, microelectronics, high-performance computing, biotechnology, and Security and Trustworthy Cyberspace (SaTC)." For this solicitation, research focused in these areas is strongly encouraged, however, additional industries relevant to a Jurisdiction's Science and Technology Plan can be considered for this solicitation with appropriate justification.

One of EPSCoR's goals is to enhance research competitiveness by strengthening STEM capacity and capability which leads to "impact the economic development in the jurisdiction." Therefore, by leveraging current and previous NSF as well as other federal agencies substantial investments in the industries and investments in the research underlying or supporting these industries, this solicitation seeks to create a significant and collective impact at targeted jurisdictions by advancing future investments towards jurisdictions' socio-economic growth. Proposals submitted for the FY22 RII Track-2 FEC competition should leverage already documented outcomes from any project (or projects) related to the industries of tomorrow topics across multiple jurisdictions and

collectively bring those together to address new economic opportunities either within those jurisdictions, or in additional EPSCoR jurisdictions. As a result, these projects are expected to create or establish a solid pathway towards impacting the jurisdictions at an economic scale in concert with a diverse STEM workforce.

If institutions from two RII-eligible EPSCoR jurisdictions (see table) If organizations from two RII-eligible EPSCoR jurisdictions collaborate on a proposal, the award amount may not exceed $1 million per year for up to four years ($4 Million maximum). If organizations from three or more RII-eligible EPSCoR jurisdictions collaborate on a proposal, the award amount may not exceed $1.5 million per year for up to four years ($6 Million maximum).

The *required* letter of intent is due December 20, 2021 and full proposals are due January 31, 2022. You can find more information on the following link: https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505263.

This is a limited competition. Only **one** RII Track-2 FEC proposal may be submitted in response to this solicitation by an organization in a RII-eligible jurisdiction**.**

***If you anticipate that you will be submitting a preproposal for this internal competition, please submit a statement of interest via InfoReady Review https://unm.infoready4.com/ using the template provided (see pg. 4) by noon on **November 29, 2020**. Note: The statement of interest is required in order for the preliminary proposal to be reviewed by the limited competitions committee.*

Please submit your 5-page pre-proposal plus coversheet, budget overview, NSF formatted biosketches, and references cited, 11 point font) by NOON on Thursday, December 2, 2021 via UNM's InfoReady Review portal https://unm.infoready4.com/. No late submissions will be considered.

The limited competition pre-proposal to UNM must include:

- A cover sheet that lists the project title and all senior personnel with each person's institution and contact information
- 5-page project description (in NSF allowable format) that includes:
    - **Research**:
        - Provide a concise description of the long-term research and education goals and intellectual focus, and describe the planned activities in sufficient detail to enable their scientific merit and broader impacts to be assessed.
        - Present proposed research in the context of other efforts in the field (with appropriate references), state the major challenges and how they will be addressed, and comment on novelty and/or originality of the proposed approach.
    - **Collaboration**:
        - Identify the institution(s) with which you will partner. Present the rationale for the composition of the teams, a description of the leadership structure, and the context for establishing the collaboration.
        - Include a specific discussion of how the collaborative effort will positively impact each participating jurisdiction and its respective economy by leveraging the chosen industry of tomorrow, including methodologies and metrics for measuring success. Explain how each participating jurisdiction will contribute to and benefit from the proposed collaboration in a meaningful and distinct way.
    - **Economic impact and Sustainability**
        - Include a plan for long-term sustainability of the proposed activities and infrastructure (physical, cyber, and human) beyond the lifespan of the project is required. Plans should clearly delineate what the expected impacts will be on the industry and jurisdiction(s) involved and how they will holistically tie into the economic development of the

jurisdiction(s) involved. They could also include potential expectations for technology transfer and innovation education to demonstrate how research activities will facilitate economic development. Provide realistic, annual metrics to assess the short and long-term economic impacts of this project.

- **Workforce Development Plan**:
  - Plans for recruitment or development of diverse early-career faculty with strategies for recruiting and retraining faculty from underrepresented populations, and plans to prepare them for future leadership roles.
  - Identify the faculty-level participants and estimate the numbers of postdoctoral, graduate, and undergraduate research participants. Outline the resources (available and planned) to accomplish the research goals.
- Provide explicit evidence for the **intellectual merit** and **broader impacts** of the research and education activities.

- Budget overview (using Table below) and 1-page budget justification
- Biosketches (NSF format) for PI and Co-PIs
- References cited

Budget Overview Table (4 year totals)

	UNM	Institution 2 (Name)	Institution 3 (Name)
Salaries w/fringe—faculty			
Salaries w/fringe—students			
Salaries w/fringe—staff			
Equipment			
Travel			
Participant Costs			
Other Costs			
F&A			
Total (4 years)			

NSF EPSCoR Track-2 FEC Statement of Interest Template for UNM
Submit via UNM's InfoReady Review portal by noon on November 29, 2021

1. Identify the institution(s) with which you will partner:

2. List all PI/Co-PI's (must have one per jurisdiction)

Name	Institution	Department	Email	Phone
	UNM			

3. Brief abstract of research and education focus (1-2 paragraphs)