



Request for Proposals

Kansas NASA EPSCoR Program Partnership Development Grant (PDG)



Proposal Due: **Noon, March 10, 2023**
Anticipated Grant End Date: **January 31, 2024**

With support from NASA and the Kansas Board of Regents - the Kansas NASA EPSCoR Program (KNEP) is preparing to award Partnership Development Grants (PDG) to Kansas investigators, under the KNEP Research Infrastructure Development (RID) program.

These grants are intended to facilitate the development of beneficial and promising NASA collaborations.

The PDG recipient is expected to initiate, develop, and formalize a meaningful professional relationship with a NASA researcher. Given this expectation, it is vital investigators and students travel to a NASA center if selected for an award.

Ideally, the faculty member, student, and research host become co-participants in a promising research effort. Indeed, the PDG award should lead to sustained collaborations, joint publications, and, most importantly, future grant proposals.

Award Criteria

PDG awards are competitive, with a strong emphasis on:

- Addressing NASA Mission Directorate and Kansas interests (required)
- Developing new, sustained, and meaningful NASA contacts (required)
- Involving US students, especially underrepresented and underserved Kansas undergraduate and graduate students, in the research (required)
- Strengthening collaboration among academia, government agencies, business, and industry
- Exploring new and unique R&D opportunities
- Shared publications and future EPSCoR and non-EPSCoR grant submissions

It's important to note that the NASA EPSCoR program is seeking to more directly align efforts with Mission Directorate (MD) objectives. Additional information on NASA, and Kansas objectives, and other resources can be found in this document's appendices. Proposers should align their work with KS and NASA MD interests!

Additionally, proposals must detail other important infrastructure development-related components, including:

- Investigator experience and long-term research plans
- Investigator-specific goals, objectives, and priorities
- Measurable, award related, deliverables or metrics
- Detailed budget information; including all costs, matching funds, and any indirect cost waivers

The KNEP PDG program cannot support proposals augmenting existing funded or well-established research projects. NASA specifically states: "*NASA EPSCoR RID elements should not augment existing funded research projects. RID activities should target unique activities that increase jurisdiction competitiveness.*" New and unique activities increasing Kansas' research infrastructure and competitiveness are essential and required.

Funding, Required Match, and Restrictions

KNEP expects to award three or four PDG grants, of **\$19,272 each**.

The following KNEP PDG program restrictions apply:

- Proposers are required to provide at least **\$2,756 in matching funds** (cash or in-kind) from non-federal sources
- Funds cannot be used for equipment (items under \$5,000 are “supplies”)
- Funds cannot be used for foreign travel
- Funds cannot be used for civil-service personnel labor or travel
- Proposals augmenting existing funded or well-established research projects cannot be supported - new and unique activities are essential and required (as noted in a previous section)
- All NASA funds must be expended within the award period (no-cost extensions are extremely unlikely)

Grant Reporting

Grant recipients must submit a final report (and potentially a progress report), addressing KNEP Research Infrastructure Development (RID) program objectives, including:

- Grant-related publications, presentations, and theses and dissertations
- Additional proposals, submitted or accepted, owing directly to the KNEP award
- Additional funding secured from industry or other sources
- Detailed information on the faculty and students supported (e.g., number of people involved, demographics, funding amounts, activities, performance, student plans, etc.)
- New collaborations formed with NASA and industry
- Impact on Kansas’ economic development
- Other quantifiable items, as defined by individual investigators (in their original proposals)
- An update on short- and long-term research plans
- Patent applications, awards, or technical transfer activities
- Other products (courses developed, websites, software and hardware, models, etc.)

PDG target outcomes, per award, include:

- One or more publications, with NASA or relevant industry co-authors
- One or more EPSCoR or non-EPSCoR grant proposals, as a product of the PDG award
- Significant project involvement by one or more students

Increasing Access to the Results of Scientific Research

In keeping with the NASA Plan for Increasing Access to Results of Scientific Research, new terms and conditions consistent with the Rights in Data clause in the award which make manuscripts and data publicly accessible may be attached to NASA EPSCoR Research awards. All proposals will be required to provide a Data Management Plan (DMP) or an explanation of why one is not necessary given the nature of the work proposed. See Appendix IV for additional information.

Additionally, researchers submitting NASA-funded articles in peer-reviewed journals or papers from conferences now shall make their work accessible to the public through NASA's PubSpace at <https://www.nihms.nih.gov/db/sub.cgi>.

PubSpace provides free access to NASA-funded and archived scientific publications. Research papers will be available within one year of publication to download and read.

Special Note:

Investigators must assure the proposed work is accurately planned and completed by the noted KNEP grant end date. NASA is under notable budget pressure. Indeed, they recently indicated, “*requests for no-*

cost extensions (NCEs) will be reviewed with increased scrutiny. It is possible that future NCE requests will be denied, and remaining funds will be returned to the Federal Government.”

Proposal Submission:

There is an 8-page limit for all PDG proposal content (no exceptions). Use one-inch margins, a 12-pt times new roman font, and single-spaced text. A specific proposal format or style (e.g., NSF) is not expected or required. Proposers simply need to effectively address the expectations outlined in this RFP.

The proposal budget must identify the distribution of available KNEP and matching funds.

Proposals must include the signature of the submitting Organization’s Authorizing Official.

Submit a single proposal document in PDF format (less than 2-MB in size) to the KNEP director, scott.miller@wichita.edu, by noon on the noted date (see the page-one header).

Contact the KNEP Director (scott.miller@wichita.edu or 316-978-6334) with any RFP-related questions.

Availability of Funds and Period of Performance:

KNEP’s ability to make awards is contingent upon the availability of NASA and Kansas Board of Regents appropriated funds from which payment can be made. The award period of performance is for approximately 8 months.

Appendices

PDG awards are designed to help researchers develop relationships with NASA Mission Directorates and Field Centers, and possibly industry, as appropriate. The efforts must, obviously, also address areas of Kansas and NASA interest.

The following material outlines Kansas and NASA strategic interests. Additional NASA specific resources and contact information is also included.

Appendix I

Kansas Strategic Interests

State science and technology strategic interests are outlined in a strategic planning document entitled *Kansas Building an Environment for Science and Technology for Innovation* or “*Kansas B.E.S.T. for Innovation*.”

An approach to meeting Kansas’ strategic objectives is outlined in this document using four goals, listed as follows:

- *“Stimulate discovery and innovation through partnerships by building on current areas of strength in agriculture, transportation, health, and education, and nurturing emerging areas of opportunity in bioscience, energy, and the environment”*
- *“Translate the results of research into meaningful solutions to societal challenges by fabricating new and patentable devices and methodologies, and providing invaluable in-formation for better-informed policies and partnerships with stakeholders”*
- *“Grow the economy by applying new technologies and expanding access to information technology, resulting in vibrant and diverse economic development that brings tangible benefits to the citizens of Kansas and attracts new business to the state”*
- *“Educate a diverse workforce and the next generation of science, technology, and business leaders”*

Kansas’ relevant areas of strength and focus include:

- Health and well-being
- Aviation and transportation
- Bioscience
- Materials
- Energy and environment

The creation of new multidisciplinary groups, industrial collaborations, partnerships, and an appropriately educated workforce leading to new products, jobs, and industry in Kansas is highly desirable.

Appendix II

NASA Strategic Goals

KNEP focuses its program and project elements on NASA's interests. From the Kansas perspective, as outlined in previous sections, the following specific "NASA Strategic Plan 2014" goals and objectives are significant:

- Strategic Goal 1 - *"Expand the frontiers of knowledge, capability, and opportunity in space."*
 - Objective 1.2: *"Conduct research on the International Space Station (ISS) to enable future space exploration, facilitate a commercial space economy, and advance the fundamental biological and physical sciences for the benefit of humanity."*
 - Objective 1.4: *"Understand the Sun and its interactions with Earth and the solar system, including space weather."*
- Strategic Goal 2 - *"Advance understanding of Earth and develop technologies to improve the quality of life on our home planet."*
 - Objective 2.1: *"Enable a revolutionary transformation for safe and sustainable U.S. and global aviation by advancing aeronautics research."*
 - Objective 2.2: *"Advance knowledge of Earth as a system to meet the challenges of environmental change, and to improve life on our planet."*
 - Objective 2.3: *"Optimize Agency technology investments, foster open innovation, and facilitate technology infusion, ensuring the greatest national benefit."*
 - Objective 2.4: *"Advance the Nation's STEM education and workforce pipeline by working collaboratively with other agencies to engage students, teachers, and faculty in NASA's missions and unique assets."*

The underlined portions of NASA's strategic objectives are particularly important to Kansas. Specific state interests intersect strongly with NASA's in the science and aeronautics related areas. Kansas has notable expertise in aviation, advanced materials, biotechnology, energy, and earth sciences. Logically, it's within these common areas Kansas is positioned to do well. KNEP is eager to grow and diversify related research infrastructure to assist NASA and Kansas in meeting its goals.

Appendix III

NASA Mission Directorates, Points Of Contact, and Recent Areas Of NASA Research Interest

The following websites provide additional useful information and links as you prepare your proposal.

https://nasainkansas.org/wp-content/uploads/2021/08/EPSCoR-2022-Research-CAN_Appendix-A002.pdf

<https://nasainkansas.org/index.php/kansas-nasa-epscor-program-knep/>

Appendix IV

Other Useful Reference Web Sites*

*(Cut and paste into URL bar if link is not operative)

NASA:

<http://www.nasa.gov>

NASA Office of STEM Engagement:

<http://stem.nasa.gov>

NASA Education Strategic Coordination Framework:

http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Strategic_Coordination_Framework.html

NASA Strategic Plan: https://www.nasa.gov/sites/default/files/atoms/files/nasa_2018_strategic_plan.pdf

Vision for Exploring the Solar System and Beyond:

<https://www.nasa.gov/topics/solarsystem/overview/index.html>

2 CFR Part 1800, NASA Uniform Administration Requirements, Cost Principles, and Audit Requirements for Federal Awards of grants and cooperative agreements:

<https://www.ecfr.gov/cgi-bin/text-idx?SID=97cf3e395c43128cdbf6f3de586ff048&mc=true&node=pt2.1.1800&rgn=div5>

NASA Centers & Facilities:

<http://www.nasa.gov/about/sites/index.html>

Guidebook for Proposers Responding to a NASA Research Announcement:

https://www.nasa.gov/sites/default/files/atoms/files/2021_ed_nasa_guidebook_for_proposers.pdf

NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES):

<http://nspires.nasaprs.com>

Most Recent Eligibility Table for EPSCoR:

https://www.nsf.gov/od/oia/programs/epscor/Eligibility_Tables/FY2021_Eligibility.pdf

NASA Plan for Increasing Access to Results of Scientific Research

http://www.nasa.gov/sites/default/files/files/NASA_Data_Plan.pdf

*For non-NASA websites, NASA provides such information for reference only. NASA does not endorse or approve content on non-NASA websites.

Appendix V

Sub Appendix D: Definitions

- Center – The nine NASA Centers located throughout the United States, plus NASA’s Jet Propulsion Laboratory (JPL), which is NASA’s only Federally-Funded Research and Development Center. Only for the purposes of collaboration in NASA EPSCoR, JPL is in the same category as NASA Centers.
- Cooperative Agreement – A legal instrument similar to a grant in that the recipient carries out a public purpose with the exception that NASA and the recipient are each expected to have substantial technical interaction with each another for the performance of the project. NASA’s cooperative agreements are managed pursuant to the policies set forth in 2 CFR 200, 2 CFR 1800, and the *NASA Grant and Cooperative Agreement Manual*. NASA awards both grants and cooperative agreements.
- Jurisdiction – States or Commonwealths eligible to submit proposals in response to this Notice of Funding Opportunity (NOFO).
- Mission Directorate – At NASA, refers to following four offices: the Aeronautics Research Mission Directorate (ARMD), the Human Exploration & Operations Mission Directorate (HEOMD), the Space Technology Mission Directorate (STMD), and the Science Mission Directorate (SMD).
- NASA Research Contact – The NASA Research Contact is the primary NASA point of contact during the proposal writing stage for the proposed research area. If the proposer has contacted and received permission from a NASA scientific or technical person, that individual may be listed in the proposal as the NASA Research Contact. Otherwise, the NASA Research Contact is the Chief Center Technologist at the Center, or the NASA Mission Directorate contact at NASA Headquarters. (See Appendix B.)
- Partnership – A reciprocal and voluntary relationship between the project personnel and NASA, industry or other entities, to cooperatively achieve the goals of the proposed research.
- Research Area – One of the areas of research interest for the NASA Mission Directorate(s).
- STEM – Science, Technology, Engineering, and Mathematics

Appendix VI

Data Management Plan - Increasing Access to the Results of Scientific Research

In keeping with *NASA Plan for Increasing Access to Results of Scientific Research*, new terms and conditions consistent with the Rights in Data clause in the award which make manuscripts and data publicly accessible may be attached to NASA EPSCoR Research awards. All proposals will be required to provide a Data Management Plan (DMP) or an explanation of why one is not necessary given the nature of the work proposed. *The DMP will be submitted by responding to the NSPIRES cover page question about the DMP (limited to 4000 characters)*. Any research project in which a DMP is not necessary shall provide an explanation in the DMP block. Example explanations:

- *This is a development effort for flight technology that will not generate any data that we can release, so a DMP is not applicable.*
- *The data that we will generate will be ITAR.*
- *Or, simply explain why the proposed project is not going to generate data.*

The type of proposal that requires a DMP is described in the *NASA Plan for Increasing Access to Results of Federally-Funded Research* (see link Section 4.4). The DMP shall contain the following elements, as appropriate to the project:

- A description of data types, volume, formats, and (where relevant) standards;
- A description of the schedule for data archiving and sharing;
- A description of the intended repositories for archived data, including mechanisms for

public access and distribution;

- A discussion of how the plan enables long-term preservation of data; and
- A discussion of roles and responsibilities of team members in accomplishing the DMP. (If

funds are required for data management activities, these shall be covered in the normal

budget and budget justification sections of the proposal).

Proposers that include a plan to archive data shall allocate suitable time for this task. Unless otherwise stated, this requirement supersedes the data sharing plan mentioned in the *NASA Guidebook for Proposers*.

In addition, researchers submitting NASA-funded articles in peer-reviewed journals or papers from conferences now shall make their work accessible to the public through NASA's *PubSpace* at <https://www.nihms.nih.gov/db/sub.cgi>. *PubSpace* provides free access to NASA-funded and archived scientific publications. Research papers will be available within one year of publication to download and read.