

Kentucky Nuclear Energy Development Authority (KNEDA) Request for Proposal (RFP)

Proposal Title:

Kentucky Nuclear Energy Development Authority Grant Program

RFP Release Date:

October 1, 2025

Proposal Submission Deadline:

October 31, 2025

Contact Information for Inquiries:

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1. Introduction

The Kentucky Nuclear Energy Development Authority (KNEDA) invites proposals for projects that contribute to both the technological advancement and economic development of Kentucky's nuclear energy sector. This RFP seeks proposals that will drive job creation, regional economic development, workforce training, public health and safety, and sustainability through nuclear energy innovation. We encourage proposals from organizations and partnerships that align with Kentucky's energy goals and broader economic development strategies, especially those aimed at nuclear ready communities, underserved or economically distressed regions.

2. Purpose of the RFP

The Nuclear Energy Development Grant Program seeks to develop nuclear energy-related projects to support the entire nuclear energy ecosystem in the Commonwealth, including utility and private sector economic development activities. As defined in Kentucky Senate Bill 179, the nuclear energy ecosystem includes but is not limited to the following:

- a) The nuclear fuel cycle, which includes fuel conversion, enrichment, and fabrication, as well as potential future spent fuel recycling and reprocessing;
- (b) Reactor design and component manufacturing;
- (c) Component supply chain manufacturing and distribution;
- (d) Facility siting and development;

- (e) Radioisotope production;
- (f) Facility operation and maintenance;
- (g) Decommissioning waste storage, transport, and management; and
- (h) End uses of nuclear energy and co-products.

KNEDA seeks proposals that will:

- Promote technology and innovation in nuclear energy solutions.
- Catalyze significant private sector investment.
- Provide job creation and workforce training opportunities, particularly in nuclear ready communities, underserved communities, or economically distressed areas.
- Promote public health and safety.
- Foster collaboration between research institutions, local communities, and industry partners to ensure long-term, sustainable economic impact.

3. Proposal Eligibility

To be eligible for funding, applicants must meet the following criteria:

- Registered organizations, universities, research institutions, or businesses within Kentucky.
- Proposals must contribute to the development, research, or commercialization of nuclear energy technologies, solutions, supply chain, or be closely related to same.
- Proposals must include a clear plan for public input and workforce engagement, with a preference for initiatives that target nuclear ready communities, underserved and economically disadvantaged or rural regions of Kentucky and community acceptance.
- Total funding must not exceed \$2 million per project.
- Applicants must demonstrate operational capacity to execute the proposed project.

4. Project Categories

Proposals can be submitted under one of the following categories, with a focus on their economic impact, regional development, and potential for sustainable growth:

1. Nuclear Energy Technology Research and Development

- Development of next-generation nuclear reactors, nuclear fuel cycles, and other innovations in reactor safety to include manufacturing for all nuclear supply chain components.
- Collaboration with industry and universities to transfer cutting-edge technologies to commercial use, creating high-tech jobs in Kentucky.
- Advancing efforts to attract nuclear-related users and development to build-ready site.

2. Environmental Remediation and Redevelopment of Legacy Sites

- Projects that add to Kentucky's environmental remediation and legacy site redevelopment activities, particularly on how such projects will increase economic vitality and workforce development in those regions,

3. Energy Infrastructure and Deployment

- Feasibility studies or pilot projects for building new nuclear power facilities, retrofitting existing infrastructure, or integrating nuclear power into the regional grid.
- Focus on energy access and resilience in rural or underserved communities, ensuring that new nuclear energy solutions provide broad economic and community benefits.

4. Workforce Development and Education

- Programs aimed at creating a highly skilled workforce for the nuclear energy sector, with specific focus on local job creation, especially in areas with high unemployment.
- Partnerships with local community colleges, universities, vocational schools, and industry partners to develop curricula that meets the needs of the nuclear energy sector.

5. Nuclear Safety and Regulatory Research

- Research into nuclear safety measures and regulatory improvements, particularly for emerging reactor technologies.
- Research into solutions for nuclear waste management, with an emphasis on job creation in environmental monitoring, waste storage, and decommissioning.

6. Public Engagement, Community Empowerment, and Awareness

- Projects that engage local communities and increase public understanding of nuclear energy, particularly in regions where nuclear energy development can provide a substantial economic boost.
- Educational campaigns, community outreach programs that provide accurate information about nuclear energy projects.
- Proposals that include partnerships with local governments or community-based organizations are encouraged.

5. Proposal Requirements

Each proposal must include the following sections:

A. Executive Summary

A 1-2 page summary that outlines the project's objectives, anticipated economic impact (job creation, regional development), and how it will contribute to the long-term sustainability of Kentucky's nuclear energy sector.

B. Technical Narrative

A detailed description (10-page maximum) of the project's technical approach, including:

- Project objectives and how they will address both energy and economic development goals.
- Methodology and approach for technology transfer, commercialization, or infrastructure deployment.
- Expected milestones, with specific, measurable outcomes for job creation and community benefits.
- Provide a description and significance of project deliverables.
- Preliminary data, if applicable.

C. Project Team and Key Personnel

List of project team members, their qualifications, and specific roles. Emphasis should be placed on the experience of the team in nuclear energy development, economic development, as well as health physics, worker safety, and environmental protection.

D. Budget and Funding Requirements

Grant budgets should not exceed \$2 million per project. Provide a detailed budget, including:

- Personnel costs
- Materials and equipment
- Travel and other indirect costs
- Economic development activities, including community engagement and workforce training.
- Private sector contributions or co-funding, if applicable, to demonstrate leveraged investment.

E. Timeline

A project timeline showing key milestones and deliverables. Include specific milestones related to job creation and economic development, as well as technical progress.

F. Risk Management Plan

Outline potential risks (e.g., economic downturns, regulatory changes, worker safety and human health and environmental risks) and mitigation strategies. Include economic risks and strategies to safeguard long-term job creation (one page maximum).

G. Environmental and Regulatory Compliance

List any nuclear permits that would be required for this project (one page maximum), if applicable.

- List any radionuclides used in proposed project, if applicable. Include health and safety plan as well as end-of-use disposal plan.

H. Outcomes and Impact

Describe (1-2 pages maximum) the expected economic and community outcomes, including:

- Job creation numbers and types of jobs (e.g., skilled, technical, manufacturing, etc.).
- Long-term impact on local communities, including property values, economic diversification and workforce skill-building.
- Environmental sustainability and energy resilience benefits to the region.

I. Sustainability Plan

Discuss the long-term sustainability of the project, including:

- How the project will continue to create jobs and economic opportunities after the grant funding period.

- Plans to scale or expand the project, if successful.
- Leveraging private sector funding or partnerships to ensure continued growth and impact.

6. Evaluation Criteria

Proposals will be evaluated based on:

1. **Innovation and Impact:** The potential for technological innovation and measurable community and economic benefits.
2. Health, safety, and environmental impacts.
3. **Feasibility and Sustainability:** Technical feasibility, long-term viability, and economic sustainability of the project.
4. **Economic Development Impact:** The ability of the project to create measurable job opportunities, economic growth, and workforce development in Kentucky, particularly in economically distressed areas.
5. **Cost-Effectiveness:** Justification of funding requirements and overall value to the Kentucky economy and energy sector.
6. **Partnerships and Leveraged Investment:** The degree to which private sector or community partnerships are involved and the level of private funding or investment being leveraged.
7. **Reporting and Accountability:** A clear plan for tracking and reporting on the project's progress, including specific metrics for job creation, economic development, and technology deployment.

7. Submission Instructions

All proposals must be submitted electronically to the following address:

Insert email address or submission portal

The subject line of the email should read: "KNEDA Grant Proposal – [Project Title]"

In your email, include all required documents in PDF format:

- Executive Summary
- Full Proposal (with all sections)
- Budget Breakdown

Late or incomplete proposals will not be considered.

8. Terms and Conditions

By submitting a proposal, applicants agree to the following:

- Adherence to the terms and conditions outlined in this RFP.
- Periodic reporting on project progress and economic impact.
- Use of grant funds only for the approved purposes.

9. Important Dates

- RFP Release Date: *October 1, 2025*
- Proposal Submission Deadline: *October 31, 2025*

10. Additional Information

For any inquiries or further information, please contact: Dave Melanson, Assistant Director, UK Center for Applied Energy Research at david.melanson@uky.edu.