On March 28, 2022, President Biden released his second budget proposal to Congress. The fiscal year (FY) 2023 President’s budget request proposes close to a 6 percent boost in discretionary spending compared to the FY 2022 enacted level for a total of around $1.6 trillion. This would include $813 billion for defense spending and $769 billion for non-defense spending. Consistent with the FY 2022 request, President Biden’s top FY 2023 budget priorities are public health, climate and clean energy, manufacturing, innovation, and education. The release of the budget request kicks of the FY 2023 appropriations process, including congressional budget hearings and mark up of the 12 annual appropriations bills. The House plans to start advancing its appropriations bills in May and the Senate shortly after. While the budget request is just a recommendation to Congress, it does provide insight into federal agencies’ priorities and future directions, many of which can be advanced within existing authorities and without explicit congressional approval.

The University of Minnesota Washington Update provides intelligence and analysis on recent federal activities. Faculty visiting Washington, D.C. are encouraged to contact Sarah Neimeyer, Director of Government Relations, at neimeyer@umn.edu. Contact Christina Laridaen, Lewis-Burke Associates LLC, at christina@lewis-burke.com with any questions or comments related to the Update’s content.

Funding Opportunities and Agency Updates

Funding Opportunity: NFWF and NOAA Release 2022 Coastal Resilience Fund Solicitation
The National Fish and Wildlife Foundation (NFWF), in partnership with the National Oceanic and Atmospheric Administration (NOAA), has released a request for proposals (RFP) for the 2022 cycle of National Coastal Resilience Fund grants. Due to an infusion of funding granted by the Infrastructure Investment and Jobs Act (IIJA) the program plans to make $140 million available for awards this program cycle, a historic increase over the fiscal year (FY) 2021 program which was funded at $39.5 million. This annual program intends to support the maintenance, planning, and design of natural and nature-based solutions to protect coastal communities from hazards including storms, floods, and erosion. Projects should also prioritize improving coastal wildlife habitats. Applicants are to choose one of four priority areas for their proposals within the accompanying average anticipated award sizes:
• Community Capacity Building and Planning ($100,000-$1 million)
• Site Assessment and Preliminary Design ($100,000-$1 million)
• Final Design and Permitting ($100,000-$1 million)
• Restoration implementation ($1-10 million)

For each listed priority area, the solicitation outlines possible project activity types, recommended metrics, and additional guidance, and applicants are highly encouraged to review those charts in preparation for submission.

All projects must demonstrate benefit to both human coastal communities and ecosystem habitats and must address all three of the following concepts:

• Nature-Based Solutions: “Projects must focus on identifying or implementing natural, nature-based or hybrid solutions, such as restoring coastal marshes, reconnecting floodplains, rebuilding dunes or other natural buffers, or installing living shorelines to both reduce climate risks to communities while enhancing habitats.”
• Community Resilience Benefit: Projects should demonstrate the benefits to coastal communities in reducing the effects or likelihood of coastal hazards.
• Fish and Wildlife Benefit: Projects address habitats for fish and wildlife.

Projects that highlight community partners, engagement of underserved communities, and stakeholder input over the life of the project will be especially competitive. Additionally, projects with the potential to scale concepts and management practices across the country including innovative approaches to conservation and sustainability will have priority for funding.

Projects must be located within the coastal states of the U.S., which does include Great Lakes states. While projects are not required to be located in a NFWF designated Resilience Hub, which are areas identified to have the greatest potential for both human and wildlife benefit, the agency offers a map of the Hubs as a helpful tool for determining appropriate regions.

Additionally, the Department of Defense (DOD) has also joined this solicitation to provide up to $15 million for projects which benefit military installations but are not located directly on military lands. Applicants interested in pursuing this funding should clearly demonstrate the hazard’s threat to the DOD mission and how the project proposes to address the hazard.

Deadline: Pre-proposals are due on April 21, 2022 at 11:59 PM ET and invitation-only full proposals will be due on June 30, 2022 at 11:59 PM ET. There will also be an informational webinar on March 30, 2022 at 3:00 – 4:30 PM ET.

Award Information: The program will support $140 million in funding with projects ranging between $100,000-$10 million depending on priority area and focus. Differently from previous iterations of this RFP, the FY 2022 solicitation does not require matching funds but will take the availability of matching funds (including DOD contributions) into account when deciding which projects should be funded.

Eligibility: All non-profit organizations; state, local, and tribal governments; and educational institutions are eligible to apply.

Sources and Additional Information:
• The full solicitation and information about the webinar are available at https://www.nfwf.org/sites/default/files/2022-03/2022-ncrf-rfp_0.pdf.

Funding Opportunity: DOD CDMRP Releases FY 2022 Peer Reviewed Medical Research Program Solicitations

The Department of Defense (DOD) Congressionally Directed Medical Research Program (CDMRP) released its fiscal year (FY) 2022 Peer Reviewed Medical Research Program (PRMRP) solicitations. For FY 2022, Congress has allocated $370 million for PRMRP in 50 topic areas.

Information on each of the funding mechanisms and a list of the FY 2022 topic areas are listed below. Those interested should carefully review the submission requirements for each funding mechanism. Additionally, interested applicants should review the “Areas of Encouragement,” in the appendix of each solicitation, for details on DOD interests in the listed topic areas. Lewis-Burke is available to speak with those interested to provide details on best practices for successful submissions, especially as they pertain to addressing military relevancy and the review processes.

Funding Mechanisms:

• The Clinical Trial Award supports the implementation of clinical trials to evaluate products, pharmacologic agents, devices, clinical guidance and emerging approaches and technologies that may significantly impact one of the diseases listed under the FY 2022 PRMRP topic areas.
  o Pre-Application Deadline: May 6, 2022; 5:00 PM ET
  o Solicitation details are available at www.grants.gov under solicitation number “W81XWH-22-PRMRP-CTA” or here.

• The Discovery Award supports the exploration of a highly innovative new concept or untested theory in the topic area(s) of interest. Postdoctoral or clinical fellow and above are eligible.
  o Pre-Application Deadline: April 22, 2022; 5:00 PM ET
  o Solicitation details are available at www.grants.gov under solicitation number “W81XWH-22-PRMRP-DA” or here.

• The Focused Program Award supports multidisciplinary research with multiple investigators, addressing an overarching goal in the topic area(s) of interest. Projects may range from exploratory/hypothesis development through small-scale clinical trials.
  o Pre-Application Deadline: May 6, 2022; 5:00 PM ET
  o Solicitation details are available at www.grants.gov under solicitation number “W81XWH-22-PRMRP-FPA” or here.

• The Investigator-Initiated Research Award supports novel research focused on patient care and allows for partnering of primary investigators.
  o Pre-Application Deadline: April 29, 2022; 5:00 PM ET
  o Solicitation details are available at www.grants.gov under solicitation number “W81XWH-22-PRMRP-IIRA” or here.
The **Technology/Therapeutic Development Award** supports the translation of preclinical findings into clinical applications for prevention, detection, diagnosis, treatment, or quality of life in the topics area(s) of interest. This is a product-oriented award.

- **Pre-Application Deadline**: April 29, 2022; 5:00 PM ET
- Solicitation details are available at [www.grants.gov](http://www.grants.gov) under solicitation number “W81XWH-22-PRMRP-TTDA” or [here](#).

**Topic Areas**: (* denotes new topics for FY 2022)

- Arthritis
- Cardiomyopathy
- Congenital Heart Disease
- Diabetes
- Dystonia
- Eating Disorders
- Ehlers-Danlos Syndrome*
- Endometriosis
- Epidermolysis Bullosa
- Familial Hypercholesterolemia
- Fibrous Dysplasia
- Focal Segmental Glomerulosclerosis
- Food Allergies
- Fragile X
- Friedreich's Ataxia*
- Frontotemporal Degeneration
- Guillain-Barre Syndrome*
- Hemorrhage Control
- Hepatitis B
- Hydrocephalus
- Hypercholesterolemia
- Hypertension
- Inflammatory Bowel Diseases
- Interstitial Cystitis*
- Malaria
- Mitochondrial Disease
- Musculoskeletal Disorders related to acute and chronic bone conditions and injuries*
- Myalgic Encephalomyelitis/Chronic Fatigue Syndrome
- Myotonic Dystrophy
- Nephrotic Syndrome*
- Non-Opioid Therapy for Pain Management
- Nutrition Optimization
- Pancreatitis*
- Pathogen-Inactivated Blood Products
- Peripheral Neuropathy
- Plant-Based Vaccines
- Platelet-Like Cell Production
- Polycystic Kidney Disease
- Pressure Ulcers
- Pulmonary Fibrosis
- Respiratory Health
- Rett Syndrome*
- Rheumatoid Arthritis
- Sleep Disorders and Restriction
- Suicide Prevention
- Sustained Release Drug Delivery
- Trauma*
- Vascular Malformations
- Viral Diseases
- Women’s Heart Disease

Although Congress decides which topic areas are funded, DOD program managers and Joint Program Committees (JPCs) retain authority in program directions and are influential in shaping the direction of CDMRP programs. CDMRP employs a rigorous two-tier review process: scientific, peer review and programmatic review. The programmatic review is intended to address the relevance of the proposed research to DOD’s needs; therefore, it is important for both the pre-application and the full proposal to consider the topic area in relation to the mission of DOD and the “Areas of Encouragement” described in the appendix of each solicitation. Additional information about the two-tier review process is available [here](#).

**Sources and Additional Background:**

UMN Washington Update
Prepared by Lewis-Burke Associates LLC
April 4, 2022
The FY 2022 PRMRP funding opportunities can be found at https://cdmrp.army.mil/funding/prmrp.

A reference table for the award mechanisms and submission requirements can be found at https://cdmrp.army.mil/funding/pdf/22prmrpreftable.pdf.

Additional information on PRMRP is available at https://cdmrp.army.mil/prmrp/default.

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**Funding Opportunity: AFRI Releases FY 2022 Education and Workforce Development RFA**

The U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA) released the fiscal year (FY) 2022 request for applications (RFA) for the Agriculture and Food Research Initiative (AFRI) Education and Workforce Development (EWD) program. The EWD program will provide $68 million in new grants for agricultural education, extension, and training activities, a significant increase over the $45 million in new grants available in the FY 2021 RFA, but slightly below the proposed $70 million included in the FY 2022 budget request. The EWD program aims to address anticipated shortages of qualified graduates in the agricultural, food, and natural resource sectors of the workforce. To this end, this program will support activities including development opportunities for K-14 education professionals, workforce training at community colleges, research and extension training for undergraduate students, and pre- and post-doctoral fellowships. EWD has four overarching goals: enhancing agricultural literacy and workforce development; training and upskilling the agricultural workforce; developing pathways for undergraduates to enter the food and agricultural sectors; and advancing science.

All proposals under this RFA must incorporate leadership development components, and applicants are encouraged to pursue projects with concrete, measurable metrics for success. New in the FY 2022 RFA, indigenous traditional ecological knowledge is explicitly denoted as an acceptable topic for research, education, or extension projects. The EWD program includes seven Program Area Priorities: (1) Professional Development for Agricultural Literacy; (2) Agricultural Workforce Training at Community Colleges; (3) Food and Agricultural Non-Formal Education; (4) Research and Education Experiences for Undergraduates; (5) Predoctoral Fellowships; (6) Postdoctoral Fellowships; and (7) Special Workforce Development Topics.

**Total Funding and Award Size:** USDA anticipates making $68 million available for an undetermined number of awards. Application deadlines and individual award amounts vary based on priority area. Additional information on each program is provided below.

- **Professional Development for Agricultural Literacy (PDAL)**
  - This program area aims to support food and agricultural sciences training of K-14 educational professionals.
  - Maximum award amount of $500,000 for three to four years.
  - Full applications are due **September 1, 2022**.

- **Agricultural Workforce Training at Community Colleges (AWT)**
  - This program area aims to expand the food and agricultural workforce through experiential learning or facilitating acquisition of industry skills or credentials at community, junior, or technical colleges.
  - Funding levels and project period vary by type of proposal.
  - Full applications are due **September 15, 2022**.

- **Food and Agricultural Non-Formal Education (FANE)**
This program area aims to develop interest and skill in STEM, content creation, and emerging technologies to solicit youth engagement in food and agricultural sciences.

- Maximum award amount of $750,000 over three to four years.
- Full applications are due **August 4, 2022**.

**Research and Education Experiences for Undergraduates (REEU)**

- This program area aims to promote research and extension competencies among undergraduate students through experiential learning in food and agricultural sciences.
- Funding levels and project period vary by type of proposal.
- Full applications are due **August 18, 2022**.

**Predoctoral Fellowships**

- This program area aims to foster future leaders in agricultural sciences, with particular interest in fellows seeking to address sustainable agricultural intensification, agricultural climate adaptation, food and nutrition translation, value-added innovation, or agricultural science policy leadership.
- Maximum award amount of $180,000 for up to three years.
- Full applications are due **October 27, 2022**.

**Postdoctoral Fellowships**

- This program area aims to develop scientists to advance and become leaders in food and agricultural sciences to solve emerging challenges in agriculture, with the same specific interest areas as predoctoral fellowships.
- Maximum award amount of $225,000 for up to two years.
- Full applications are due **September 8, 2022**.

**Special Workforce Development Topics – National Extension Clearinghouse for Industry and the Workforce (NECIW)**

- This program area aims to connect regional efforts to develop a national framework for nonformal education and training in food and agriculture, identify gaps in the workforce, and provide solutions to address local and regional workforce challenges.
- Maximum award amount of $10,000,000 for up to five years.
- Full applications are due **October 13, 2022**.

**Special Workforce Development Topics – Youth Innovators Empowering Agriculture Across America (YEA)**

- This program area aims to support regional partnerships to enhance the system of Positive Youth Development outreach.
- Maximum award amount of $7,850,000 for up to five years.
- Full applications are due **June 30, 2022**.

**Eligibility and Submission Limitation:** Eligible applicants under this solicitation include but are not limited to: State Agricultural Experiment Stations; colleges and universities, including junior colleges; university research foundations; and other research institutions. Applications from or partnerships with minority-serving institutions, small or mid-sized institutions, or institutions located in Established Program to Stimulate Competitive Research (EPScoR) states are encouraged. Institutions may not submit multiple applications under this RFA.

**Cost Sharing:** A one-to-one cost share is required for applications, including those that are commodity-specific and those that fail to address research issues in a national context. NIFA may waive the matching requirement for a grant under specific criteria outlined in the RFA.
Funding Opportunity: DOE Releases $84 Million Solicitation for Urban Integrated Field Laboratories for Climate Solutions

The Department of Energy (DOE) Office of Science Biological and Environmental Research Office (BER) released an $84 million funding opportunity announcement (FOA) for Urban Integrated Field Laboratories (Urban IFL). Under this new program, DOE plans to fund up to five, multi-institutional projects in diverse urban regions around the country and would be funded at up to $5 million per year over five years. Institutions are limited to one submission as the lead institution.

The Urban IFL program is intended to advance the scientific understanding of urban systems and their interactions with the climate system. The goal is to help inform equitable climate and energy solutions which can strengthen community scale resilience across urban landscapes, especially those exposed to extreme weather and variable climate. The Urban IFLs will bring together diverse scientific disciplines that involve activities such as field observations, modeling, data assimilation, and model-data fusion to help find equitable solutions based on state-of-the-art uncertainty quantification and data analytics.

Urban IFLs should be focused on an urban region in the United States. DOE defines an urban region as “densely populated areas, encompassing interdependent environmental, ecological, infrastructure, and human components.” The highest priority urban regions are those in climate-sensitive locations, are highly heterogenous, and climate events in urban landscapes have disproportionate impacts for disadvantaged communities. Key factors for an urban region include: “uneven distribution of physical landforms and vegetation, environmental processes, the build environment and infrastructure, population density, and socioeconomic clustering in the urban landscape.” Examples of cities from prior advisory committee recommendations include: Baltimore, Maryland; Boston, Massachusetts; Chicago, Illinois; Denver, Colorado; Indianapolis, Indiana; Knoxville, Tennessee; Los Angeles, California; New York, New York; Phoenix, Arizona; Portland, Oregon; Salt Lake City, Utah; San Francisco/Oakland, California; and Seattle, Washington. Urban IFL proposals must address all three research focus areas (RFA):

1. Spatial variabilities across the greater urban regions and how the variabilities exert influences on local micro-climates and micro-environments affecting urban communities.
2. Observing and modeling biogeochemical cycling and atmospheric composition in urban systems.
3. Quantifying the benefits of equitable solutions that can be applied to heterogenous urban regions in addressing the climate crisis.

DOE also provides guidance on successful attributes of Urban IFLs including:

- An emphasis on the basic sciences of climate, environmental, ecological, and urban change affecting urban regions. However, there is a use-inspired component where the fundamental research can subsequently be used to inform sustainable, resilient, and equitable climate solutions. DOE further emphasizes that special consideration will be given to proposals that advance science that address and can inform solutions to the climate change impacts affecting underrepresented and/or disadvantaged communities.
• The proposed urban region must be unique yet exhibit some climatic, demographic, or other similarities to other U.S. urban regions. Results and lessons from an Urban IFL should translate and be applicable to other U.S. urban centers.

• The Urban IFL research must combine new observations with high resolution and highly detailed urban modeling, where data generated by observations and models are used for scientific analysis.

• The Urban IFL must provide opportunities to inspire, train, and support leading scientists from a variety of institutions, including Minority-Serving Institutions. DOE further updated the program policy factors used to score and evaluate proposals which now would strongly encourage proposals: “ensuring opportunities to investigators not currently supported by DOE”, “commitment to sharing the results of research”, “promoting the diversity of supported investigators”, “promoting the diversity of institutions receiving awards”, and “institutional history of hiring, promoting, and placing scientists from underrepresented communities in the scientific workforce.”

DOE also highlighted additional eligibility and other key requirements:

• Applications must address all three RFAs and each must be presented in a science plan that demonstrates how one focus area will inform the research in the other areas. However, an application can include different levels of emphasis for each RFA. The solicitation includes examples of supporting questions that would be responsive to the FOA.

• Applications must be multi-institutional and have multiple science themes that focus on the development of a single Urban IFL.

• The research program of the Urban IFLs must be led by scientists with documented expertise.

• Local minority serving institutions (MSIs) are expected to have significant roles in each Urban IFL management team, either as a lead organization or a key member.

• Urban IFLs should engage a diverse workforce and have significant contributions from team members from local populations.

• Eligible applicants include academic and nonprofit research institutions, national laboratories, other federal agencies, and the private sector.

Due Dates: Pre-applications are due on April 19, 2022. Full submissions are due on June 16, 2022.

Total Funding, Award Size, and Cost Share: DOE allocated $17 million a year over five years for this program for a total of $84 million. DOE plans to award 3 to 5 grants or cooperative agreements for a five-year project period. The awards are expected to be between $2 million to $5 million per year. There are no cost sharing requirements.

Limited Submissions: Institutions are limited to one submission as the lead institution. Institutions can participate on multiple applications as non-leads. Principal Investigators may be listed as senior or key personnel on separate applications without limitation. DOE will consider the last received submission to be the institution’s intended submission.

Additional Information:

• DOE will host a webinar on March 30 to provide additional information and registration is available at https://www.zoomgov.com/webinar/register/WN_ZzTApnz9RemiOu19evuDGw

• The full solicitation is available at SC_FOA_0002581.pdf (osti.gov)
Funding Opportunity: DARPA Microsystems Technology Office (MTO) Releases Office-Wide Broad Agency Announcement

The Defense Advanced Research Projects Agency (DARPA) Microsystems Technology Office (MTO) announced its Office-wide Broad Agency Announcement (BAA), which solicits innovative research ideas for issues not currently addressed by open MTO programs or solicitations. MTO seeks to uphold DARPA’s mission and address potential microsystems-related challenges through its four thrust areas:

1. **Embedded Microsystem Intelligence and Localized Processing:** MTO research focuses on the development of sensors or systems that utilize “specialized computation at the tactical edge”, as well as microsystems that could move beyond the current capabilities of learning and functioning. In this BAA, MTO is particularly interested in technologies that have the potential to improve cognitive or advanced electronic warfare (EW) technologies.

2. **Next Generation Front End Component Technologies for Electromagnetic (EM) Spectrum Dominance:** The Department of Defense (DOD) command, control, communications, computing, intelligence, surveillance, and reconnaissance (C4ISR) and EW systems are highly valuable to the Department, however, EM technologies, which are highly utilized by C4ISR and EW systems, are widely seen as specialized by the commercial electronics industry causing production to be limited. MTO is dedicated to investing in innovative research that could make these technologies less costly.

3. **Microsystem Integration for Increased Functional Density and Security:** MTO is committed to maintaining leadership in the “Fourth Wave” revolution of 3D heterogeneous integration at various length scales. Fine-scale integration is the key to connecting commercial capabilities with DOD-specific discriminators. To address this, MTO seeks tools and methods to realize fine-scale integration, as well as looks to address challenges related to increasingly complex circuits and systems-on-chip (SoC).

4. **Disruptive Defense Microsystem Applications:** MTO makes key investments in research that focuses on quickening the pace of innovation through revolutionary applications of unique microsystems component technologies, like those developed under the above three thrusts.

This BAA is primarily interested in early-stage research that has the potential to evolve into future MTO programs. MTO will consider both single-phase and multi-phase efforts. Topics areas of interest to MTO include, but are not limited to “chip-scale sensors; compound semiconductor-based electronics and other emerging device technologies; computational architectures and algorithms for next generation artificial intelligence (AI); and quantum devices,” amongst others. Of note, this year’s BAA includes two new topics related to “metrology and manufacturing tools for multi-chip, multi-technology packaging” and “multi-domain, integrated tools for virtual prototyping.” These topic areas indicate increased interest in priorities laid out in the related CHIPS for America Act, which seeks to address U.S. semiconductor manufacturing shortfalls. The full list of topic areas of interest can be found in the BAA.

Any given proposal will be evaluated on the basis of its overall scientific or technical merit, potential contribution to DARPA’s mission, and the proposed cost of the project.

**Award Information:** Though multi-phase efforts are allowed, proposers are strongly encouraged to submit studies to this BAA. Studies are defined as single-phase research efforts that will last no more than 12 months and will cost less than $1 million. Multi-phase projects are defined as efforts with several stages that may last longer than 12 months and cost more than $1 million. Multi-phase projects must provide transparent topic areas with quantitative technical merits. Multiple awards and agreements are anticipated to be made but will depend on the quality of proposals received and the availability of funds.
Eligibility Information and Deadline: All entities capable of meeting the needs of this BAA are eligible to apply. Abstracts and proposals will be accepted on a rolling basis, but abstracts must be submitted by January 6, 2024. Full proposals must be received no later than March 16, 2024. Proposers are strongly encouraged to submit an abstract. More information on this BAA is available on DARPA’s website or SAM.gov, and the full BAA is available here.

Agency Update: DOE Releases Funding Solicitations in Bioenergy, AI and Climate and Plans Workshops to Help Advance $10 Billion in Carbon Management Projects

DOE released funding opportunities to establish new Urban Integrated Field Laboratories focused on climate solutions as well as on bioenergy and AI research to advance particle physics. DOE announced a virtual and in-person workshops in several cities around the country to discuss future plans on spending more than $10 billion in funding from the infrastructure bill for carbon management-related research and development and infrastructure projects, including direct air capture hubs and carbon utilization. DOE will also be hosting a workshop on bioenergy’s role in soil carbon management.

New Funding Opportunities

- $35 million for Waste Feedstock and Conversion for Biofuels and Bioproducts: Concept papers due April 18
  o The focus is on improved organisms and inorganic catalysts to support the next generation of low-carbon biofuels and bioproducts and projects that enable waste feedstock utilization and conversion processes to produce low-carbon biofuels that reduce emissions for hard-to-decarbonize sectors such as aviation.
  o The four topic areas include:
    ▪ Municipal solid waste feedstock technologies,
    ▪ Robust microbial cells,
    ▪ Robust catalytic processes, and
    ▪ Community scale resource and energy recovery from organic wastes.
  o DOE plans to make up to 25 awards ranging from $500,000 to $2.5 million over two to three years.
  o A 20 percent cost share is required.

- $84 million for Urban Integrated Field Labs for Climate Solutions: Pre-applications due April 19
  o DOE plans to fund up to five, multi-institutional projects in diverse urban regions around the country and would each be funded at up to $5 million per year over five years.
  o The Urban IFL program is intended to advance the scientific understanding of urban systems and their interactions with the climate system.
  o The goal is to help inform equitable climate and energy solutions which can strengthen community scale resilience across urban landscapes, especially those exposed to extreme weather and variable climate.
  o The Urban IFLs will bring together diverse scientific disciplines that involve activities such as field observations, modeling, data assimilation, and model-data fusion to help find equitable solutions based on state-of-the-art uncertainty quantification and data analytics.
  o Institutions are limited to one submission as the lead institution.

- $10 million for Artificial Intelligence Research for High Energy Physics: Letters of Intent due April 21
  o DOE will fund proposals in three topic areas:
- AI for HEP: AI research that advances P5 science drivers or development of new AI-based technologies that expand the science of HEP research priorities
- HEP for AI: Research that supports the use of HEP to improve the understanding of the theoretical capabilities and limitations of fundamental AI.
- HEP AI Ecosystem: Support for HEP datasets for public access or integration of modern machine learning software into standard HEP tools.

   - Multi-institutional team proposals must be lead by a DOE national lab, but university partnerships are strongly encouraged. The average award size will be around $750,000 per year over three years.
   - Research universities may submit a single-institution seed application with an average award size of around $75,000 per year over three years. This is designed for exploratory investigations by researchers and institutions new to the field or smaller scale studies of HEP or AI-research. DOE recommends this path for Principal Investigators (PIs) from non-traditional HEP institutions, HEP PIs who have minimal prior AI research experience, or for establishing feasibility of blue-sky research.
   - Institutions may only submit up to four applications as a lead institution.

**Engagement Opportunities**

- **Workshop on Bioenergy’s Role in Soil Carbon Storage**: March 28-29
  - The focus will be on methods for building healthy soils, decarbonizing agriculture and forestry, and assessing full life cycle greenhouse gas emissions associated with generation biomass for bioenergy.
- **DOE Regional Carbon Management Applicant Education Workshop**: April 7
  - DOE will discuss future opportunities related to more than $10 billion in funding from the infrastructure bill through the Office of Fossil Energy and Carbon Management, including new commercial scale-storage facilities, point-source CO2 capture demonstration projects, direct air capture hubs, hydrogen production hubs with carbon capture and storage, carbon utilization, and CO2 transport.
  - The virtual event will then be followed by in-person, day-long workshops to discuss opportunities to advance large-scale carbon management-related infrastructure projects, including:
    - April 13 in Columbus Ohio,
    - April 19 in New Orleans, Louisiana, and
    - April 26 in Salt Lake City, Utah.

**Upcoming Funding Opportunities**

- April/May: $20 million for Mathematical Multifaceted Integrated Capability Centers
- April/May: $15 million for microelectronics research and co-design centers
- April/May: $25 million for quantum internet and communications networks
- April/May: $7 million for Quantum Information Science research for Nuclear Science
- May 15: Draft funding opportunity announcement for Hydrogen Hubs
- May/June: $50 million for Carbon Management research and development
- April/May/June: ARPA-E programs in decarbonizing iron and steel production, low-energy nuclear reactions, and high-energy fast charging batteries for electric vehicle