# Energy Research Snapshot: DOE Updates and Opportunities



# **Department of Energy Funding and Engagement Opportunities**

DOE will be releasing a large number of funding opportunities over the next several months as it finalizes its FY 2021 spend plan after Congress passed final appropriations in December 2020. A new funding opportunity announced this week is for software development for next-generation supercomputing. Funding opportunities are still open for direct air capture and carbon utilization. This week, DOE also released the first Request for Information through the new Office of Accelerator R&D and Production for input from the research community on future investments needed to develop the next-generation accelerator systems for science and industrial applications. Opportunities are still available to help guide future research directions for chemical upcycling and high energy physics/space-based astrophysics.

## **Funding Opportunity Announcements**

- \$12 million for Programming Environments for Scientific Computing: Pre-applications due March 1
  - DOE plans to make 4 awards to collaborative groups that develop innovative approaches to update scientific applications
    for new parallel-programming environments and innovative methods to testing scientific applications to ensure they
    function properly as they are adapted to new systems.
- \$8 million for Engineering-Scale Testing and Validation of Algae-Based Technologies and Bioproducts: Applications due March 2
  - DOE plans to select 4 projects (TRL 4-6) that would develop and test algae-based technologies that can utilize carbon dioxide from power systems or other industrial sources to create valuable products and services. Projects are expected to propose testing at an existing CO2 slip-stream test facility or at the site of an industrial partner.
- \$15 million for <u>Direct Air Capture Technologies</u>: Applications due March 5
  - DOE plans to select 8 projects in two areas: bench-scale testing of structured material systems or components designs for optimized direct air capture (TRL 3) and initial engineering design of carbon capture, utilization, and storage systems for direct air capture (TRL 6)

#### Request for Information to Define Future Research and Funding Opportunities

- Plastics Innovation Challenge Draft Roadmap: Responses due March 1
  - DOE is seeking feedback on the R&D priorities in the new draft <u>roadmap</u> for the development and deployment of technologies for plastic waste management and reduction. Priority areas include deconstruction, upcycling, recyclability by design, support for a domestic plastics supply chain.
- High Energy Physics and Space-Based Astrophysics: Responses due March 8
  - DOE and NASA are seeking information in three focus areas, such as radio telescopes and future uses of the International Space Station, for joint research and infrastructure projects that can advance science and technology priorities and leverage each agency's unique capabilities, infrastructure and resources.
- Creating a Robust Accelerator Science and Technology Ecosystem: Responses due March 15
  - DOE is most interested in about the current marketplace of particle accelerator technology and feedback on models for technology transfer, workforce development, and mechanisms to strengthen the domestic supply chain.

### Research and Development (R&D) Roadmaps to Guide Future Investments

Innovations in Building Energy Modeling: R&D opportunities for DOE's Building Technologies Office to expand the use of building
energy modeling in the design and operation of commercial and residential buildings to reduce energy use, including improved core
modeling capabilities, interoperability and automation, and graduate fellowships.

#### **Workshops and Meetings**

- 2021 Lighting R&D Workshop: February 1-4, 2021
- 2021 Hydrogen Program Annual Merit Review and Peer Evaluation Meeting: June 7-11, 2021
- 2021 Wind Energy Technologies Peer Review: August 3-5, 2021

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