Opportunity Title: Carbon Management Opportunity
Opportunity Reference Code: DOE-STP-FECM-2021-03

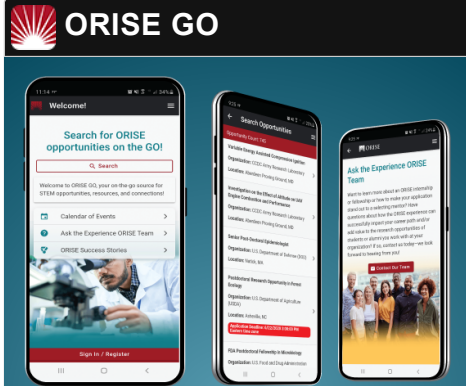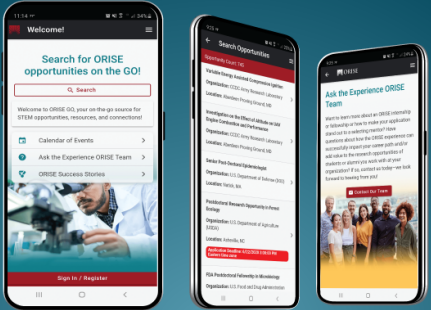|	
Organization	U.S. Department of Energy (DOE)
Reference Code	DOE-STP-FECM-2021-03
How to Apply	Click on *Apply* below to begin your application.
Application Deadline	10/17/2021 11:59:00 PM Eastern Time Zone
Description	The U.S. Department of Energy (DOE) Science, Technology and Policy Program is designed to provide opportunities to participate in programs, projects, and activities at the Office of Fossil Energy and Carbon Management (FECM). The STP Program provides an opportunity for highly talented scientists and engineers to participate in policy-related FECM projects in Washington, D.C. or Germantown, MD.

Under the guidance of a mentor, you will be involved in learning all aspects of the analysis of examining the impacts of large-scale deployment of a variety of decarbonization technology options that interact (both directly and indirectly) with the bulk power system. The project will include examining a range of scenarios that considers various mixes of a wide range of decarbonization technology options including, but not limit to a). zero carbon emitting technologies, b). carbon capture from large carbon emitting point sources (e.g., electricity generation and industrial sources using fossil or biomass resources as fuel or feedstocks) and c) carbon capture directly from ambient air.

The participant will have a hands-on learning experience that focuses on, but not limited to:

- Modifying existing and/or developing new representations of decarbonization technology options that facilitates robust, high spatial and temporal resolution security constrained economic dispatch analyses of deep decarbonization scenarios.
- Aiding in FE-261 efforts to improve PLEXOS analysis capabilities through enhancement of vendor-provided simulation ready data sets (i.e., enhanced representation of generator assets; fuel pricing; temporal and spatial variability of fuel prices; electricity supply (in particular variable energy resources) and demand).
- Contributing to the scoping, structuring and execution of short-, medium-, and long-term analyses that are likely to enhance the technical understanding of system aspects of deep decarbonization scenarios.
- Participating in development of reports, whitepapers, and other materials suitable for publication in high impact scientific, technical, economic and/or policy focused journals

and conferences.

As a participant, you will be placed with the Carbon Management division and learn skills and activities that are critical to FECM's technology mission. For more information about the Office of Fossil Energy and Carbon Management visit: https://www.energy.gov/fe/office-fossil-energy.

Participant Benefits

You will receive a stipend as support for your living and other expenses during this appointment. Stipends are typically based on the participant's academic standing, discipline, experience, and research facility location. Relocation expenses, not to exceed $5,000, incurred in relocating from your current address to Washington, D.C. (if more than 50 miles from the address shown on the application), may be reimbursed. You will receive a travel allowance of $5,000 per appointment year to cover travel-related expenses to scientific and professional development activities.

This opportunity is available to U.S. citizens.

Appointment Locations

Washington, DC

Germantown, MD

Nature of Appointment

The participant will not enter into an employee/employer relationship with ORISE, ORAU, DOE, or any other office or agency. Instead, the participant will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment.

Qualifications   Applicants must have received within the last 60 months or be currently pursuing a master's or doctoral degree by the anticipated start date.

Preferred Skills for each project are listed below:

- Python or Java programming experience.
- Familiarity with integrated energy systems and/or techno-economic analysis
- Ability to review technical work in research, development, design, operational analysis, evaluation, and improvement processes, systems, and subsystems associated with carbon utilization systems, methods, or products
- Be able to provide technical and management advice and recommendations to Program Manager and related project groups as requested
- An interest in contextualizing deeper technical assessments

of R&D investment in terms of viable commercial maturation of technologies and environmental sustainability implications

How to Apply:

A complete application consists of:

- An application
- Transcript(s) - For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Selected candidate may be required to provide proof of completion of the degree before the appointment can start.
- A current resume/CV
- One Letter of recommendation - While a letter of recommendation is not required to be considered, applicants are required to provide contact information for one recommendation in order to submit the application. Applicants are encouraged to request a letter of recommendation before submission as this may help reviewers have a better understanding of the applicant's qualifications and interests. The letter of recommendation must be submitted on your behalf before selections are completed and offers are made.

The resume/CV must include the following:

- Basic applicant Information: Name, address, phone, and email
- Work & Research Experience: List all work and research experiences beginning with current or most recent. Include the name of the employer, location, position held, and time involved.
- Leadership Experience: List experiences (e.g., work, civic, volunteer, research) that demonstrate your leadership skills. Detail your role, type of experience, organization, location, and duration.
- Educational History: List all institutions from which you received or expect to receive a degree, beginning with current or most recent institution. Include the name of the academic institution, degree awarded or expected, date of awarded or expected degree, and academic discipline.

Honors & Awards: List in chronological order (most recent first) any awards or public recognitions. Include the name of awarding institution, title of the award or honor, and date of award or honor.

Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blanked out, blackened out, made illegible, etc.) prior to uploading into the application system. All documents must be in English or include an official English translation.

If you have questions, please send an email to DOE-RPP@orise.orau.gov. Please list reference code (DOE-STP-FECM-2021-03) for this opportunity in the subject line of your email.

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Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
    - **Chemistry and Materials Sciences** (11 👁)
    - **Computer, Information, and Data Sciences** (1 👁)
    - **Earth and Geosciences** (1 👁)
    - **Engineering** (8 👁)
    - **Environmental and Marine Sciences** (14 👁)
    - **Life Health and Medical Sciences** (1 👁)
    - **Science & Engineering-related** (1 👁)
    - **Social and Behavioral Sciences** (1 👁)
- **Age:** Must be 18 years of age