Opportunity Title: DOE HydroWIRES Fellowship
Opportunity Reference Code: DOE-STP-CMEI-H2O-HYDRO

Organization U.S. Department of Energy (DOE)

Reference Code DOE-STP-CMEI-H2O-HYDRO

How to Apply Click the ***Apply*** button below

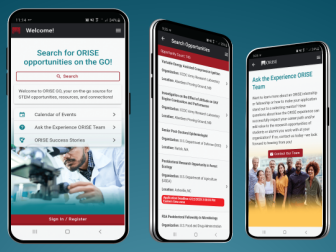
Description The U.S. Department of Energy (DOE) Science, Technology and Policy Program (DOE-STP) is designed to provide opportunities for students, postgraduates, and faculty to participate in programs, projects, and activities at the Department. Fellows will receive hands-on experience that provides an understanding of the mission, operations, and culture of the DOE. As a result, fellows will gain deep insight into the federal government's role in the creation and implementation of energy technology policies; apply their scientific, policy, and technical knowledge to the development of solutions to issues of importance to the DOE and continue their education and involvement in areas that support the DOE mission either in a technical or policy-related role.

About the Hydropower and Hydrokinetic Office
The U.S. Department of Energy (DOE) catalyzes the transformative growth of basic and applied scientific research and the discovery and development of new energy technologies, and prioritizes scientific innovation as a cornerstone of U.S. economic prosperity. DOE is the leading federal agency for the advancement of energy technologies through research, development, demonstration, and commercial application (RDD&CA) activities.

The Office of Critical Minerals and Energy Innovation (CMEI) leads a large network of National Laboratories, researchers, industry partners, and communities across the nation to develop and deploy innovative technologies that deliver affordable, reliable, and secure energy. This fellowship is located in CMEI's Hydropower and Hydrokinetic Office (H2O) in Washington, DC. H2O is committed to developing and deploying a portfolio of innovative technologies for power generation from water resources, including hydropower, waves, and tides. H2O drives critical research and development efforts to expand electricity generation from these resources and, through its Energy-Water Resources (EWR) program, to strengthen the resilience and efficiency of the nation's interdependent energy and water systems.

About this Opportunity
H2O's Hydropower Program conducts research, development, and demonstration activities to advance flexible, reliable, and cost-effective energy production through next-generation hydropower and pumped storage technologies. The existing pumped storage hydropower (PSH) fleet, for example, comprises 550 GWh of storage and 22 GW of capacity, making it by far the largest source of energy storage in the US. Conventional reservoir hydropower can be operated flexibly. The changing

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power system creates opportunities for hydropower and PSH to provide new value and support the transition to a 100% clean energy future.

Fellows will pursue these opportunities by applying technical knowledge to various projects and ongoing efforts in the office. As a participant, you will both learn and participate across a range of activities associated with applied research. The office is also highly receptive to new ideas that fellows may have regarding research topics and strategies.

With guidance from your mentor, you will learn how to:

- Research and utilize technical insight to inform research projects in a range of topics focused on quantifying the value of hydropower to the power system, mapping plant capabilities and associated constraints, optimizing hydropower operations, and developing new technologies to enable increased flexibility.
- Participate as part of a dynamic team to understand challenges and opportunities associated with the changing power system.
- Interact with DOE National Labs and industry partners who lead many HydroWIRES research projects.
- Interact with utilities, technology developers, ISOs, environmental groups, regulators, and international partners to understand perspectives of the hydropower and broader power system communities.
- Learn about the technical review process for funding opportunities.
- Participate in and collaborate on conferences relating to hydropower, energy storage, and/or renewable energy.
- Co-author and/or help reviewing publications such as white papers, government reports, stakeholder outreach materials, or peer-reviewed journal articles related to hydropower.
- Collaboratively participate with the broader office on areas of hydropower environmental outcomes, fleet modernization, low-impact hydropower development, and marine energy technologies.

You will collaborate on the office's HydroWIRES Initiative, whose mission is to understand, enable, integrate, and improve hydropower’s and pumped storage hydropower’s contributions to reliability and resilience in the rapidly evolving U.S. electricity system. The HydroWIRES Initiative, as the office's grid integration program, includes research in four broad areas:

1. Understanding value drivers for hydropower under evolving system and market conditions;
2. Describing flexible capabilities and associated tradeoffs associated with hydropower meeting system requirements;
3. Optimizing hydropower operations and resource planning; and
4. Developing innovative technologies that enable hydropower to operate more flexibly.

HydroWIRES efforts also include power/water system modeling, valuation

and technoeconomic analysis, innovative technology R&D, convening stakeholders, and international collaboration.

Past and present fellows have commented that H2O provides a supportive mentorship environment and a positive office culture. H2O highly values fellows and encourages them to proactively pursue their interests within our range of work. We would be happy to arrange for you to speak with our numerous current and previous participants to get a further sense of our office culture and the
opportunities this placement could provide.

Qualifications How to Apply

A complete application consists of:

- A Zintellect profile and responses to opportunity-specific questions
  - Note: Applicants must submit a personal statement detailing their interests and qualifications. The statement should be original; use AI tools only for grammar or basic feedback.
- Academic Records/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 candidates may be required to provide proof of completion of the degree before the appointment can start.
- A current resume/curriculum vitae (CV)
- One Recommendation - Applicants are required to provide contact information for one recommender to submit the application. You are encouraged to request a recommendation from professionals who can speak to your abilities and potential for success, as well as your scientific capabilities and personal characteristics. Recommenders will be asked to complete a recommendation in Zintellect. Recommendation requests must be sent through the Zintellect application system. Letters of recommendation submitted via email will not be accepted.

*All documents **must** be submitted via Zintellect in order to be considered and must be in English or include an official English translation. 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.*

The resume/CV must include the following:

- Basic applicant Information: Name, address, phone, email, and other contact information.
- Work and Research Experience: List all relevant work and research experiences beginning with current or most recent. Include the name of the employer, location, position held, and time period 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

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recognitions. Include the name of awarding institution, title of the award or honor, and date of award or honor.

If you have questions, please send an email to DOE-STP@orise.orau.gov and list the reference code [DOE-STP-CMEI-H2O-HYDRO] in the subject line of your email.

Stipend $10,000.00 – $12,500.00 Monthly

Point of Contact Alyson

Eligibility Requirements

- **Degree:** Any degree .
- **Discipline(s):**
  - **Business** (11 👁)
  - **Chemistry and Materials Sciences** (12 👁)
  - **Communications and Graphics Design** (6 👁)
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (29 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (51 👁)
  - **Mathematics and Statistics** (11 👁)
  - **Other Non-Science & Engineering** (13 👁)
  - **Physics** (16 👁)
  - **Science & Engineering-related** (2 👁)
  - **Social and Behavioral Sciences** (30 👁)
- **Age:** Must be 18 years of age