Opportunity Title: Opportunity in Electrification Technology Development
Opportunity Reference Code: DOE-EERE-STP-VTO-2020-1300

Organization U.S. Department of Energy (DOE)

Reference Code DOE-EERE-STP-VTO-2020-1300

Description The Energy Efficiency and Renewable Energy (EERE) Science, Technology and Policy (STP) Program is designed to provide opportunities for students, postgraduates, established scientists and faculty to participate in programs, projects, and activities that support the mission of the EERE. Participants will hold appointments at DOE-EERE Headquarters, EERE field offices, and other EERE-approved sites. Participants will receive hands-on experience that provides them with an understanding of the mission, operations, and culture of EERE.

ORISE is continuing normal program operations during the COVID-19 pandemic. This opportunity will be offered as long as Department is able to complete the onboarding process and ensure a meaningful experience to participants. We encourage you to apply and submit your application as soon as possible. Updates to this opportunity will be provided on this page as needed.

Last year, vehicles transported 11 billion tons of freight, more than $32 billion worth of goods each day, and moved people more than 3 trillion vehicle-miles. The U.S. Department of Energy's Vehicle Technologies Office (VTO) provides low cost, secure, and clean energy technologies to move people and goods across America. See our complete website at https://www.energy.gov/eere/vehicles/vehicle-technologies-office.

With their immense potential for increasing the country's energy security, economic vitality, and quality of life, plug-in electric vehicles (PEVs) – including plug-in hybrid electric and all-electric vehicles – will play a key role in the country's transportation future. VTO supports a diverse portfolio to lower the cost and increase the convenience of Plug-In Electric Vehicles. VTO is collaborating with national laboratories and industry to improve batteries and electric drive systems. VTO's Batteries, Charging, and Electric Vehicles program aims to research new battery chemistry and cell technologies that can: 1) Reduce the cost of electric vehicle batteries to less than $100/kWh—ultimately $80/kWh 2) Increase range of electric vehicles to 300 miles and 3) Decrease charge time to 15 minutes or less.

Read more about the Batteries and Electrification Program here: https://www.energy.gov/eere/vehicles/batteries-charging-and-electric-vehicles.

VTO seeks a talented and committed individual who will learn and engage in the following:

- Participate and collaborate with the U.S. DRIVE (Driving Research and Innovation for Vehicle efficiency and Energy sustainability) government-industry partnership and 21st Century Truck Partnership to better understand how DOE R&D can meet user needs and address research gaps. Will participate with key community stakeholders and federal staff to augment R&D portfolio direction and suggest new initiatives to further

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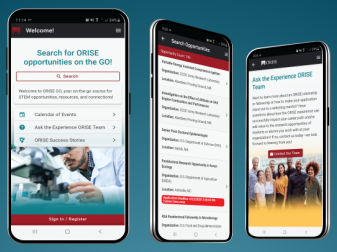
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the state of the art in transportation electrification.
- Collect and analyze the latest science and engineering technological advances in state-of-the-art applications pertaining to electrification. Consolidate knowledge and complete reporting for active technology R&D projects regarding technologies such as wireless charging, smart charging, extreme fast charging, vehicle-grid interfacing, cybersecurity, and electric drive systems.
- Collaborate and link research efforts supporting increased electric vehicle charging and electrification with broader initiatives such as increased generation from renewables and grid modernization.
- Write and publish technical reports documenting the data, analysis, and resulting insights of work/projects performed.
- Research requirements and perform analysis, interpret technical reports and papers related to electric vehicles, electric grid, electric machines and power electronics.
- Collaborate with National Laboratory and headquarters contractors, project principal investigators, government and industry representatives.
- Participate with other members of the Vehicle Technologies Office in the development of related documentation and reporting for assigned activities.

Participant Benefits

Participants will receive a stipend to be determined by EERE. Stipends are typically based on the participant's academic standing, discipline, experience, and research facility location. EERE may authorize a stipend increase to offset the costs of health insurance. Participants are eligible to purchase the family or individual health insurance plan offered through ORISE. A relocation allowance may be provided for participants relocating to the hosting facility. Participants may receive an allowance for education and/or scientific activities as approved by EERE.

This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR).

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.

For more information on the EERE-STP program, please visit https://www.energy.gov/eere/education/energy-efficiency-and-renewable-energy-science-technology-and-policy-program.

Qualifications Preferred qualifications include:

• Masters or PhD in Electrical/Chemical/Mechanical Engineering, Materials Science & Engineering, Physics, Chemistry, and/or related sciences.
• Lab or application experience in fabrication, testing, and diagnostics for vehicle systems and/or power electronics

• Knowledge of engineering principles, concepts, standards, and methods.
• Experience in developing, managing, and evaluating projects and programs.
• Strong written and oral communication skills to present technical results and briefings to audiences of all levels.
• Confidence and curiosity to learn, ask questions, and engage with top energy storage experts at the national labs, industry, and academia.

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

All documents must be in English or include an official English translation.

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

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Master's Degree or Doctoral Degree received within the last 36 months or anticipated to be received by 8/3/2020 11:59:00 PM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (7 👁)
  - **Engineering** (12 👁)
  - **Mathematics and Statistics** (1 👁)
  - **Physics** (3 👁)
  - **Science & Engineering-related** (1 👁)
- **Age:** Must be 18 years of age