

Opportunity Title: Vehicle Technologies Office: Electrification Technology

Development Opportunity

Opportunity Reference Code: DOE-EERE-STP-VTO-2023-1300

Organization U.S. Department of Energy (DOE)

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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/curriculum vitae (CV)
- One Letter of Recommendation. References are asked to describe applicant's Scientific Capabilities and Personal Characteristics and must specify how they know the applicant.

The resume/CV must include the following:

- Basic applicant Information: Name, address, phone, email, and other contact information.
- 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 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 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-RPP@orise.ora.gov.

Please list the reference code for this opportunity in the subject line of your email: DOE-EERE-STP-VTO-2023-1300

Description

The Energy Efficiency and Renewable Energy (EERE) Science, Technology and Policy (STP) Program serves as a next step in the educational and professional development of scientists and engineers by providing opportunities to participate in policy-related projects at DOE's Office of Energy Efficiency and Renewable Energy in Washington, D.C. Participants will become part of a group of highly trained scientists and engineers with the education, background, and experience to be part of the workforce that supports the DOE's mission in the future.

Each year in the U.S., vehicles transport 18 billion tons of freight – about \$55 billion worth of goods each day – and move people more than 3 trillion vehicle-miles. The transportation sector has historically relied heavily on petroleum, which supports over 90 percent of the sector's energy needs today and, as a result, has surpassed electricity generation to become the largest source of CO2 emissions in the country. Transportation sector decarbonization is therefore critical to achieving the goal of



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economy-wide decarbonization by 2050. The U.S. Department of Energy's Vehicle Technologies Office (VTO) funds research, development, and deployment of low cost, secure, and clean vehicles to move people and goods across America. For more information, please visit <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 electric drive systems and enable vehicle-grid integration. 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:

- Building relationships to engage programs and public-private partnerships to increase the speed of transitioning to EVs and deploying the supporting infrastructure.
- Participate in and organize meetings, workshops, and conferences with key community stakeholders and federal staff to augment R&D portfolio and suggest new initiatives to further the state of the art in transportation electrification and vehicle-grid integration
- Collect and analyze the latest science and engineering technological advances in state-of-the-art applications pertaining to electrification. Under the guidance of a mentor, 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.
- Under the guidance of a mentor, conduct technical reviews of projects funded by VTO.
- Collaborate and link research efforts supporting increased electric vehicle charging and electrification with broader initiatives such as increased generation from renewables and grid modernization.
- Collaborate and direct the modeling and analysis of vehicle charging infrastructure and electric grid integration.
- Under the guidance of a mentor, 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, the electric grid, and electric vehicle supply equipment.
- Collaborate with National Laboratory experts and DOE Headquarters contractors, project principal investigators, other Fellows, government, and industry representatives.
- Participate with other members of the Vehicle Technologies Office in the development of related documentation and reporting for assigned activities.

These activities may be carried out in collaboration with teams of multi-level federal employees, other participants, support service contractors, and experts from national laboratories.

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Selected participants will receive a stipend as support for their living and other expenses during this appointment. Stipend rates are determined by EERE officials and are based on the candidate's academic and professional background. Relocation expenses, not to exceed \$5,000, incurred in relocating from the participant's current address to Washington, D.C. (if more than 50 miles from the address shown on the application), may be reimbursed. Participants will receive a travel allowance of \$10,000 per appointment year to cover travel-related expenses to scientific and professional development activities.

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

For more information about the EERE Science, Technology and Policy Program, please visit <https://www.energy.gov/eere/education/energy-efficiency-and-renewable-energy-science-technology-and-policy-program>

Appointment Location

Washington, DC

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 letter of appointment and Terms of Appointment.

Qualifications**Preferred qualifications:**

- Currently pursuing or have completed requirements for a Masters or PhD in Electrical/Chemical/Mechanical Engineering, Materials Science & Engineering, Physics, Chemistry, and/or related sciences.
- Confidence and curiosity to learn, ask questions, and engage with top electric vehicle experts at the national labs, industry, and academia.
- Strong written and oral communication skills to present technical results and briefings to audiences of all levels.
- Knowledge of engineering principles, concepts, standards, and methods.
- Lab, application, or analysis experience in fabrication, testing, and diagnostics for vehicle systems and/or power electronics
- Experience in developing, managing, and evaluating projects and programs.

You must meet the following criteria to participate in the program

- Be a U.S. Citizen or Lawful Permanent Resident.
- Be currently pursuing or have completed requirements for a Master's or PhD within the last three years, or complete all the requirements for the degree by the anticipated start date of the appointment.
- Applicants with education or professional experience in Engineering and Physical Sciences are encouraged to apply.

Full program eligibility requirements can be found at:






visit <https://www.energy.gov/eere/education/energy-efficiency-and-renewable-energy->

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[science-technology-and-policy-program](#)

**Eligibility
Requirements**

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Master's Degree or Doctoral Degree received within the last 36 months or currently pursuing.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** (2 )
 - **Engineering** (18 )
 - **Environmental and Marine Sciences** (2 )
 - **Mathematics and Statistics** (3 )
 - **Physics** (3 )
- **Age:** Must be 18 years of age