Opportunity Title: Efficient and Healthy Schools Fellow
Opportunity Reference Code: DOE-EERE-STP-BTO-2021-1202

Organization	U.S. Department of Energy (DOE)
Reference Code	DOE-EERE-STP-BTO-2021-1202
How to Apply	Click the link below and select "apply"

Description

Antiquated school facilities can lead to internal air quality problems that aggravate respiratory illnesses and reduce student and teacher performance, according to the U.S. Environmental Protection Agency. Two scientific systematic reviews[1,2] concluded that inadequate building ventilation is associated with the increased risk of transmission of respiratory infections, including COVID-19 and many others. Several studies[3,4,5] have also found that fresh air is critical for keeping students alert and healthy, while spaces with low ventilation rates are associated with lower average daily attendance, slower speed in completing tasks, and higher rates of suspension. In addition, extensive research compiled by the 21st Century Schools Fund also linked school facility deterioration to negative impacts on both student and teacher performance. These health and safety problems disproportionately impact schools in disadvantaged communities serving low-income student populations, which also suffer from dirtier outdoor air and are less likely to have dedicated facility managers.

To better support schools, especially those with low-income student populations, the U.S. Department of Energy (DOE) and the U.S. Department of Education (ED) with the U.S. Environmental Protection Agency (EPA) launched a new adoption campaign to enable school facility upgrades that create healthier spaces for learning and maximize energy efficiency to improve resilience and reduce school utility expenditures. Through the Efficient and Healthy Schools campaign, schools can access technical assistance, peer sharing, recognition and targeted resources to enable investments in their facilities.

PROJECT AREAS:

1. Will learn to facilitate cross-departmental collaboration between DOE, ED, and EPA, participating schools, school districts, state energy and education offices and other stakeholders to leverage current and new programs targeted at schools;
2. Develop and maintain relationships with key school stakeholders;
3. Learn to review and advise on the development, publication, and promotion of key resources and materials related to investment decisions for school energy, decarbonization and health (demonstration reports, case studies, training, performance specifications and bulk purchasing);
4. Become an expert on existing, current tools and resources developed to support school efficiency and health, and environmental learning; and effectively communicate the benefits of these tools and resources to encourage their use;
5. Will learn to facilitate communications, outreach, and public-facing materials developed for states, districts, schools, and non-profit partners;
6. Support ED in receiving and reviewing U.S. Department of Education Green Ribbon Schools (ED-GRS) nominations from states, coordinating virtual events and webinars, and conducting stakeholder outreach and engagement.
7. Synthesize findings from recent and upcoming public engagement events related to school sustainability, infrastructure, health, and environmental learning.
8. Participate in technical reviews/assessments of proposed activities, conduct technical and economic feasibility analysis, as well as evaluate the progress and ongoing viability and success potential of Healthy and Efficient Schools projects toward meeting the BTO’s goals.
9. Assist in the assessment of the state-of-the-art scientific literature and practice in relevant technologies and assess new opportunities for further advancement in the field and the industry.
10. Collaborate with other Building Technologies Office (BTO) Fellows in support of Efficient and Healthy Schools and develop short-term and long-term quantitative goals for Efficient and Healthy Schools, and supporting sub-programs.

[1] Li, Y. (2007). Role of ventilation in airborne transmission of infectious agents in the built environment – a multidisciplinary systematic review. https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1600-0668.2006.00445.x

[2] Luongo, J. C. (2016). Role of mechanical ventilation in the airborne transmission of infectious agents in buildings. PubMed. https://pubmed.ncbi.nlm.nih.gov/26562748/

[3] Mendell, M. J. (2005). Do indoor pollutants and thermal conditions in schools influence student performance? A critical review of the literature. https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1600-0668.2004.00320.x

[4] Fisk, W. J. (2017). The ventilation problem in schools: literature review. https://onlinelibrary.wiley.com/doi/abs/10.1111/ina.12403

[5] Brink, H. W. (2021). Classrooms' indoor environmental conditions affecting the academic achievement of students and teachers in higher education: A systematic literature review. https://onlinelibrary.wiley.com/doi/10.1111/ina.12745

This Fellowship will involve collaborative opportunities with the U.S. Department of Energy's Commercial Buildings Integration program and U.S. Department of Education Green Ribbon Schools (ED-GRS) recognition award, as well as broader work at the U.S. Department of Education regarding climate leadership, school infrastructure, health, and environmental learning.

BTO's Commercial Buildings Integration (CBI) program seeks to deploy a range of innovative building technologies and solutions, to produce significant energy savings, greenhouse gas emissions reductions and save businesses money. CBI partners with a diverse set of stakeholders to produce simple, straightforward, intuitive and actionable resources, strategies and tools to be shared through ongoing industry engagement and innovative programming.

The aim of U.S. Department of Education Green Ribbon Schools (ED-GRS) is to inspire schools, districts, and institutions of higher education (IHEs) to strive for 21st-century excellence by highlighting promising school sustainability practices and resources that all can employ. To that end, ED-GRS recognizes schools, districts, and IHEs that: reduce environmental impact and costs; improve the health and wellness of schools, students, and staff; and provide effective environmental and sustainability education.

Qualifications

Preferred qualifications include:

- A Bachelor's Degree.
- Knowledge of energy efficiency, sustainability, environmental education, and indoor environmental quality concepts.
- Knowledge of the K-12 sector, school facilities, and education policy.
- Experience with school stakeholders, decisionmakers, and influencers.
- Excellent written and oral communication skills.

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 academic recommendation. References are asked to describe applicant's Scientific Capabilities and Personal Characteristics and must specify how they know the applicant.
- Letter of Recommendation

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Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Associate's Degree, Bachelor's Degree, Master's Degree, or Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Communications and Graphics Design** (2 👁)
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (46 👁)
  - **Mathematics and Statistics** (10 👁)
  - **Physics** (16 👁)
  - **Science & Engineering-related** (1 👁)
  - **Social and Behavioral Sciences** (28 👁)