DEPARTMENT OF ENERGY AND ENVIRONMENT

NOTICE OF REQUEST FOR INFORMATION

K-12 Energy Efficiency Education and Outreach

The Department of Energy and Environment (DOEE) is issuing this request for information (RFI) to seek information on successful approaches and best practices for implementing an energy efficiency education and outreach program for students in the District of Columbia. This project will be focused on introducing students to energy-efficient high performance building principles and creating a pipeline of qualified candidates from high school to continuing education for careers in the energy efficiency industry.

This document is a Request for Information only – it is not being posted as an actual statement of work (SOW), nor does it constitute a Request for Proposal (RFP), a Request for Application (RFA) or a promise to issue an RFP or RFA in the future. Respondents are advised that DOEE will not pay for any information or costs incurred in response to this RFI; all costs associated with responding to this RFI will be solely at the interested party's expense. Not responding to this RFI does not preclude participation in any future RFP or RFA.

A person may obtain a copy of this RFI by any of the following means:

> Download from the Department's website, www.doee.dc.gov. Select the Laws & Regulations tab. Cursor over the pull-down list and select Public Notices & Hearings. On the new page, cursor down to the announcement for this RFI. Click on Read More and download this RFI.
>
> Send a request by email to lolita.perry@dc.gov with "RE: K-12 Energy Education RFI" in the subject line.

The deadline for RFI responses is Friday, June 23, 2023, at 11:59 PM. Responses should be submitted via email (preferred) to lolita.perry@dc.gov or by mail to DOEE's office at 1200 First Street NE, 5th Floor, Washington, DC 20002. Attention: Lolita Perry, Data and Benchmarking Division.

For additional information regarding this RFI, call Lolita Perry at 202-673-6711.

Request to Stakeholders

Stakeholders responding to this RFI are asked to provide informed responses and feedback regarding the program description below. The response should describe any benefits, changes, limitations, unintended consequences, and potential economic gains or losses that may result

from the program. In addition, respondents can provide recommendations (including proposed draft Request for Qualifications (RFQ)/RFP/RFA language) regarding the best approach for implementation and program design—specifically noting how the program would impact the District's K-12 students' education and awareness of the energy sector.

Introduction and Background

DOEE's K-12 energy education and outreach program is designed to help the District achieve its Sustainable DC Plan[1] goals of 1) teaching at least 50 percent of children in the District about sustainability concepts by 2032; and 2) ensuring that all school-age children in the District are prepared for the changing green economy. Through the K-12 energy education program, DOEE seeks to introduce the concepts of energy efficiency and building performance, and ultimately connect students with careers in the energy industry.

DOEE is a recipient of the funds and oversees several programs that are funded by the U.S. Department of Energy's (DOE's) State Energy Program (SEP), which provides funding and technical assistance to states, territories, and the District of Columbia to enhance energy security, advance state-led energy initiatives, and increase energy affordability. DOE's SEP emphasizes the state's role as the decision-maker and administrator for program activities within their state that are tailored to their unique resources, delivery capacity, and energy goals.

RFI Purpose

DOEE is issuing this RFI to seek feedback from stakeholders on designing energy education projects that will help meet the two components in the K-12 Energy Education Program: 1) how to design an engaging, effective, and hands-on building science curriculum ending with an Ice Box Challenge or similar skills project; and 2) how to promote workforce development that exposes and increases the access of high school students to careers in the energy industry and employability of the students**.**

K-12 Curriculum and Ice Box Challenge

Program Description

DOEE is seeking to develop a net-zero energy building and building science-focused curriculum designed to give students a head start understanding of building science and high-performance, net-zero energy design and technology. The District's energy green codes and existing building energy efficiency policies (Building Energy Performance Standards[2]) have a goal of constructing net-zero energy or net-zero energy ready buildings. Early education will interlock with those policy goals, creating opportunities for District students in the local building sector. The K-12 energy education program and net-zero energy curriculum will have two paths: 1) a step-by-step approach to improving energy efficiency in new and existing buildings; and 2) practical

[1] https://sustainable.dc.gov/sdc2
[2] https://dc.beam-portal.org/helpdesk/kb/BEPS/

experience with a skills project, such as completion of a group project that demonstrates the technology learned through the curriculum.

DOEE wants to develop hands-on building and construction opportunities for students, to construct net-zero energy mockups and assemblies, such as the Ice Box Challenge[3]. The Ice Box Challenge or similar skills lesson would be an interactive, hands-on experience and contest to demonstrate how a home can be energy efficient and comfortable using better building designs, thereby reducing carbon pollution. The goal is to build upon existing construction or sustainability classes in some schools that teach conventional construction methods in the mechanical, electrical, carpentry and other construction trades.

K-12 Curriculum and Ice Box Challenge Questions

1. What is the best time (after school, Saturday mornings, vacation, etc.) to conduct this program for DC public schools, charter schools, private schools, and their students? What are the pros and cons (if any) with specific program timings?
2. Would this program work best as a stand-alone program or would it be more effective to connect with an existing program/curriculum (STEM classes, science affairs, etc.)?
3. What are examples of school programs' best practices that the District can consider while designing the program's goals?
4. What barriers should be considered before deploying energy related programs with DC public schools, charter schools, private schools, teachers, students, and parents? How can the District mitigate these barriers?
5. What incentives would maximize student participation?
6. Which stakeholders should be involved in the development/design of this program? List any government, education, nonprofit, union and business partners that should be involved to successfully develop/design this initiative?
7. Which stakeholders would be the best fit to execute either the net-zero curriculum or Ice Box Challenge?
8. How should the curriculum connect to and support career pathways for high school students looking to enter the workforce, e.g., college, and/or union apprenticeships programs?

Workforce Development Program Description

Students need a better understanding of career options that exist in the world around them, especially in the energy sector. The U.S. Energy and Employment Report (USEER) showed "in 2021, energy jobs grew 4.0% from 2020, outpacing overall U.S. employment, which climbed 2.8% in the same time period. The energy sector added more than 300,000 jobs, increasing the total number of energy jobs from 7.5 million in 2020 to more than 7.8 million in 2021."[4] DOEE is seeking to design a program that introduces District students to careers in the energy, building science, and construction industries, with the goal of helping them to identify, prepare, and

[3] https://iceboxchallenge.com/
[4] https://www.energy.gov/policy/us-energy-employment-jobs-report-useer

connect to that career field. This program should include a variety of transitions, from high school direct to the workforce, college, and apprenticeship programs.

Workforce Development Questions

1. While each age group has its own unique needs, what methods are recommended to begin the conversation about building science related career and education options for high school students attending DC public schools, charter schools, or private schools?
2. What strategies should the District use to create a pipeline of qualified candidates for building science jobs across education levels?
3. How should the District track students as they progress through this pipeline and into the workforce?
4. What are good examples of programs designed to promote careers in energy efficiency and building science? What are the best practices for designing programs like this?
5. Would a workforce development activity work best as a stand-alone program or would it be more effective to connect with an existing program/curriculum (STEM classes, science affairs, etc.)?
6. Which stakeholders should be involved in the development/design of this program? List any government, education, nonprofit, union, and business partners that should be involved to successfully develop/design this initiative?
7. If this was a standalone program, how should school curriculums connect to and support career pathways for high school students looking to enter the workforce, college, and/or union apprenticeships programs?