

DE-FOA-0002715: Bipartisan Infrastructure Law (BIL)—Request for Information on Energy Improvements at Public School Facilities

Submitted by:

National Insulation Association (NIA)

Michele M. Jones, EVP/CEO

516 Herndon Pkwy, Suite D, Herndon VA, 20170

Contact: 703-464-6422, ext. 119, mjones@insulation.org

The National Insulation Association® (NIA) is a not-for-profit educational trade association representing merit and union contractors, distributors, laminators, fabricators, and manufacturers that provide thermal insulation, insulation accessories, and components to the commercial, mechanical, and industrial markets throughout the nation. Since 1953, the northern Virginia–based association has been the voice of the mechanical insulation industry and is dedicated to keeping the commercial and industrial sectors up-to-date on the latest industry trends and technologies.

Category 1 Questions—Capacity Development

2. For which aspects of school facilities projects (e.g., needs assessments and energy audits, contracting, performance contracting, financing, project management, maintenance and operations) are LEAs most in need of additional capacity?

First is knowledge and then expertise. For these facilities to understand the needs, they will need to understand the opportunities and areas that need assessing. Then, they need subject matter experts (SMEs) to conduct the work or SMEs to provide training in the areas that should be assessed.

3. Effective technical assistance (e.g., technical, financing, or project management guidance; connecting LEAs with supporting partners or financing opportunities):

a. What kinds of technical assistance would be most effective in helping LEAs and their partners develop competitive applications and build long term capacity to maintain and enhance their facilities?

Again, the knowledge of what technology is needed to achieve the objective. For example, if the HVAC system is to be replaced because it is old and inefficient, then you should know that the duct system will also need to be replaced. You should not replace one without replacing the other. All the ducts will need insulation, and that knowledge needs to be made available as well. For example:

- Assessing the opportunity for energy savings and the risk of indoor air quality concerns (e.g., mold development) with damaged or underperforming pipe and/or HVAC duct insulation.

Solution: Have a minimum of one Certified Insulation Energy Appraiser in each school district trained in the assessment of existing mechanical and duct insulation systems.

Category 2 Questions—Needs Assessments

1. Appropriate scope of needs assessment:

- a. **What information should be collected in a needs assessment to develop plans for energy, health, and safety benefits of energy improvements at school facilities and to balance the identification of comprehensive projects while maintaining ease of application?**

These facilities need to have access to the knowledge of what should and could be improved, replaced, or repaired. Providing a resource of SMEs and a team of skilled technical energy appraisers would be the most ideal scenario for the highest level of effectiveness.

- b. **To what extent are schools capable of conducting such a needs assessment with in-house staff and/or specifying and procuring consulting services for needs assessments?**

- It is our belief that the current school personnel do not possess the sufficient knowledge to understand the needs.
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- Creating a series of pre-recorded modules—that can be used for school boards, school administrators, and operational personnel—that are focused on the public and private educational facilities,
 - Understanding:
 - The impact of mechanical insulation on preventing indoor air quality concerns (e.g., mold development, etc.);
 - Energy efficiency opportunities and the impact on reduction of carbon emissions, including why mechanical insulation is often overlooked;
 - The ease of determining return on investment (ROI), etc. on energy efficiency related topics (3E Plus software/appraisal program);
 - Why it is important to think about freeze protection sooner than later;
 - An overview of insulation systems for maintenance and/or retrofit projects;
 - How insulation projects could be used as a student educational opportunity;
 - Why school boards and administrators should think about going beyond minimum standards and examining the potential risk vs. benefit of thinking outside the norm. (e.g., freeze protection, acoustics, etc.);
 - Where insulation is normally found in schools and why (an overview of all insulation segments—roof, envelope, mechanical, original equipment manufacturer (OEM), and resource information, etc.), including passive

- protection;
- Why it is important to properly and timely repair or replacement damaged insulation; and
- The importance of and how to determine what insulation system(s) are in your schools.

Solution: Development of the learning modules through a partnership with NIA and making the modules available to all school districts, especially smaller and remote districts.

c. What is the typical range of costs and time required to conduct such a needs assessment for a public K-12 school (in \$/sq. ft. or similar units)?

Each facility would be unique depending upon size, location, age of facility and system, and timing of when an assessment could be performed. Estimates could be extrapolated by conducting a sampling of assessments in various regions to determine an overall average.

3. What barriers exist for LEAs and schools to collect, track, and share information on energy use and facility assessments, including additional assets (e.g., portable classrooms, auxiliary structures, etc.)?

The biggest barrier is the lack of knowledge and skill set as well as finding available training and being able to pay for that training. A typical school or local education agency will not have this type of assessment capacity without being educated.

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Category 4 Questions–Workforce

- 4. What workforce models (e.g., training, partnership, career maps, etc.) exist to ensure that members of rural and disadvantaged communities have access to the work associated with school energy improvements?**

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Category 6 Questions: Partnership Structures

4. How can DOE best facilitate the formation and sustainability of these partnerships?

Create a website that connects experts with LEAs, schools, with approved public and private entities. Provide a roadmap guide outlining what the partnerships should focus on and do not limit their selection or pit one technology against the other.