



# How 3E Plus® Can Help You Apply for School Retrofits Funding Programs

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## Up to \$80 million in clean energy grants

The U.S. Department of Energy (DOE) recently announced the Renew America's Schools Grants, which provide for clean energy improvements at K-12 public schools. The funds will help school districts make upgrades to lower facilities' energy costs and foster healthier learning environments for students. Schools can now apply for the first round of the grant, up to \$80 million of the \$500 million program.

In addition, states and utilities may also have incentives, and energy efficiency improvements can be cost-effective even without subsidies. This guide will explain who is eligible for this funding, how insulation upgrades can benefit schools, and why the 3E Plus<sup>®</sup> tool can be an excellent way to get started on your proposal.

### Who Can Take Advantage of this Funding?

Section 40541 of the Infrastructure Investment and Jobs Act specifies eligible entities as a consortium of one Local Educational Agency (LEA), one or more schools, and nonprofit, for-profit, and community partner organizations with the knowledge and capacity to partner and assist with energy improvements. DOE has stated that these project partners can include:

- Governmental entities such as states, local governments, and Tribes
- For-profit entities such as utilities and companies that provide energy services or manufacture energy systems
- Non-governmental organizations such as community-based organizations, national associations, labor unions, workforce training providers, and energy-focused groups

The DOE envisions awarding multiple financial assistance awards in the form of grants. The estimated period of performance for each award will be approximately 2 to 5 years in duration.<sup>1</sup>

### Insulation Upgrades Can Save Your School Money on Energy Bills

For example, a recent report found that for schools, office buildings, apartments, and stand-alone retail buildings, completing roof and HVAC pipe insulation upgrades results in whole-building energy savings of approximately 5 percent on average nationally. Even higher savings are available based on building type and location. Nearly 70 percent of these savings flow from decreased need for natural gas use resulting in lower greenhouse gas emissions.

Nationally, primary schools would save an average of nearly 9 percent by incorporating these insulation improvements, while secondary schools would average energy savings of 7 percent.<sup>2</sup>

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<sup>1</sup>Additional information and resources related to this new opportunity may be available at the following web page, <https://www.energy.gov/bil/grants-energy-efficiency-and-renewable-energy-improvements-public-school-facilities>).

<sup>2</sup>Insulation Industry Opportunity Study Executive Summary, [https://www.insulationadvocacy.org/\\_files/ugd/bb658f\\_4ede57e9f545427a9610df665e32f1e9.pdf](https://www.insulationadvocacy.org/_files/ugd/bb658f_4ede57e9f545427a9610df665e32f1e9.pdf)



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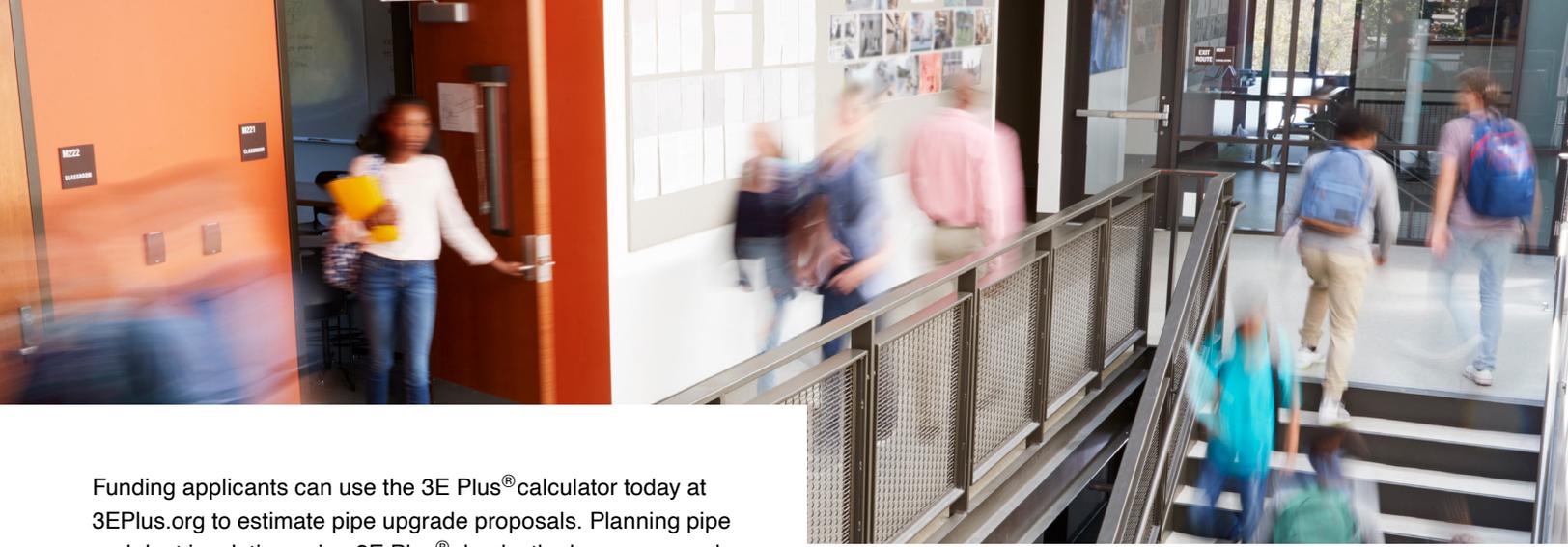
### Using the Free Online 3E Plus® Tool for HVAC Pipe Insulation Upgrades

Adding or upgrading pipe insulation, which provides significant cost savings, is an upgrade covered under the grant program. 3E Plus® is a free online tool that can help estimate energy cost savings from insulating piping and ductwork. In addition to calculating the most cost-effective thickness for any application, 3E Plus® can quantify the operational emission reductions from insulating mechanical systems to help meet decarbonization goals. With just a few pieces of information, you can use 3E Plus® to calculate the savings across various thicknesses of insulation and estimate overall energy savings.

For example, a one-story primary school with a hot water boiler used for space heating makes the following calculations:

1. Determine heating system type/efficiency: 80% efficient hot water boiler @ 180°F
2. Estimate the length and size of pipe: 1000 ft of 1" pipe and 500 ft of ½" pipe is uninsulated
3. Hours per year that the heating system operates assumed for 12hrs/day for 7 months or 2500hrs/yr

In this scenario, if ½" of insulation is added to the 1" piping and ½" piping, it would achieve annual savings of \$0.99/ft and \$0.64/ft of piping, respectively. That results in an annual savings of approximately \$1300 per year from installing pipe insulation.



Funding applicants can use the 3E Plus<sup>®</sup> calculator today at [3EPlus.org](http://3EPlus.org) to estimate pipe upgrade proposals. Planning pipe and duct insulation using 3E Plus<sup>®</sup> checks the box on several objectives that DOE will encourage eligible applicants to consider in the proposal. These include:

DOE Objective	How 3E Plus <sup>®</sup> and Insulation Can Help
Enabling replicable and scalable impacts	▶ 3E Plus <sup>®</sup> is a robust tool that can assess the potential energy savings at the time of application
Can be completed quickly	▶ Insulation products are readily available, and projects can be acted upon quickly upon signing
Leverage funding and economies of scale	▶ Easily adjust 3E Plus <sup>®</sup> models to get energy savings results for specific projects
Are crafted thoughtfully within the context of public school facilities (e.g., procurement restraints, construction windows, etc.)	▶ Insulation upgrades can be performed during break periods or, in some cases, during instruction periods with minimal disruption

Since HVAC insulation retrofits are replicable, scalable, easy-to-install, and can increase occupant comfort, they are an excellent option for many of these considerations. Once released, this funding won't last long, so start your HVAC pipe upgrade proposal by visiting [3Eplus.org](http://3Eplus.org).

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NAIMA is the association for North American manufacturers of fiber glass, rock wool, and slag wool insulation products. Its role is to promote energy efficiency and environmental preservation through the use of fiber glass, rock wool, and slag wool insulation, and to encourage the safe production and use of these materials. Through the Insulation Institute™, we leverage the collective insulation expertise of our organization and our members to empower homeowners and professionals to make informed insulation choices. Our mission is to enable a more comfortable, energy-efficient and sustainable future through insulation — and we are constantly working with building professionals, homeowners, government agencies, and public interest, energy and environmental groups to realize that vision.

**Discover more insulation knowledge at [InsulationInstitute.org](https://InsulationInstitute.org)**

This summary is offered for informational purposes only and neither guarantees nor predicts your qualifications to receive federal grants.

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