



# HELPING SCHOOLS MAKE THE MOST OF ELECTIVE PAY

***A PLAYBOOK FOR STATE LEADERS***  
***2025***

**UNDAUNTEDK12**  
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School Infrastructure  
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## Disclaimers

*This work represents our best understanding of Elective Pay and energy tax credits for general informational purposes only and is not itself tax guidance. Please consult qualified tax professionals about your specific circumstances and refer to guidance issued by the IRS for detailed information on the rules associated with Elective Pay and energy tax credits.*

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# UNDAUNTEDK12

[UndauntedK12](#) is a national nonprofit working to ensure that every student in our nation's public schools has the opportunity to attend a safe, healthy, and resilient school, free from the [growing disruptions](#) caused by extreme weather.

We believe the current moment offers opportunities to address long standing inequities, stimulate the economy, enhance critical public infrastructure, and position America to lead the world in the transition to clean energy-driven commerce and community.

We envision a day when every dollar spent on K-12 infrastructure is aligned with building an equitable, zero-emissions future; when every education leader recognizes that rapidly changing climate threatens their core mission; and when every student is prepared to build a sustainable future.



The [National Center on School Infrastructure \(NCSI\)](#) is a resource hub supporting the stewardship of our nation's public school facilities. NCSI works to equip local and state leaders with the know-how to deliver modern school buildings and grounds for their communities. To inform policy decisions and build effective systems of stewardship, NCSI curates resources, fosters knowledge-sharing, and provides technical assistance.

NCSI is sponsored by the U.S. Department of Education and based at the University of California, Berkeley.

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# Helping Schools Make the Most of Elective Pay

⚡ A PLAYBOOK FOR STATE LEADERS

**E**nergy tax credits offer unprecedented, non-competitive funding for school districts to embrace clean energy technologies that can reduce ongoing operating costs and support healthy and resilient schools.

Funding is delivered through a mechanism called Elective Pay, which allows schools and other non-taxable entities to receive a cash reimbursement for the full value of the tax credits they earn when they install eligible clean energy technologies.

Since funding for the tax credits is mostly uncapped, Elective Pay could deliver one of the largest ever federal investments in school facilities. Districts are eligible for reimbursement for as many eligible clean energy machines as they install and own until the provisions sunset starting at the end of 2032.

**Elective Pay unlocks new funding for efficient, healthy, resilient K-12 school infrastructure.**

**HOW SCHOOLS BENEFIT FROM TAX CREDITS**

*Clean energy tax credits have long been available to tax-paying entities including companies and individuals.*

*The Inflation Reduction Act (IRA) introduced Elective Pay (also called “Direct Pay”) to provide non-taxable entities like school districts with an opportunity to receive the full value of a clean energy tax credit as a cash reimbursement. To learn more, read the U.S. Department of the Treasury’s [Fact Sheet: Inflation Reduction Act Tax Credits Can Fund School Facilities Upgrades and Reduce School District Energy Bills from January 2024](#) and Government Finance Review’s [Direct Pay: How States and Local Governments Can Use Direct Pay to Finance a Transition to Clean Energy from August 2024](#).*

States have good reason to play a leadership role in ensuring their school districts make the most of Elective Pay. States are responsible for approximately [22 percent of capital expenditures](#) in school facilities. Elective Pay can complement that spending and help districts make investments that lower operational costs. Second, while [many school districts](#) are already beginning to harness Elective Pay to transition to clean energy, others are likely to fall behind reflecting a legacy of [both chronic underinvestment and substantial inequity](#) in school infrastructure. States can engage to ensure that low-capacity districts have the support they need to take advantage of Elective Pay.

Lastly, communities suffering from underinvestment are also [disproportionately vulnerable](#) to the impacts of extreme weather. Clean energy technologies can help school districts adapt and play a [life-saving role for their community](#) in case of disasters or disruption. States can build resilience in their communities by helping districts invest in clean energy with Elective Pay.

Now is the moment for states to organize their resources and programs so that these federal funds and the cost-saving clean energy technologies they unlock can advance more equitable and resilient school facilities for generations of students, educators, and staff.

Any state leader whose work has a nexus with school facilities has a role to play. This resource outlines no-regrets, straightforward actions as well as transformative steps that motivated state leaders can take to support their school districts to make the most of this federal funding.

**Elective Pay provides states with an opportunity to drive clean energy adoption in the school communities that need it most.**



Stock Photo: West Virginia Capitol.

## WHO IS THIS PLAYBOOK FOR?

- State agencies including education agencies, budget directors, energy offices, public health departments, and school construction authorities
- State legislators
- Governor’s offices
- Utilities and public utility commissions
- Green banks
- Professional associations of superintendents, school boards, business/finance officers and facilities leaders

**Part I: The Opportunity** provides a quick overview of the benefits of clean energy and the new opportunity for school districts through the Elective Pay. Readers who already understand the benefits of clean energy for school districts, clean energy tax credits, and Elective Pay may advance to Part II.

**Part II: Domains for State Action** summarizes the five domains of action for state leaders. Contained in this section is a table that maps the actions to specific leadership roles (e.g. state agency, legislator) so that readers can quickly identify which actions may be most relevant.

**Part III: Catalog of State Actions** lays out a set of detailed recommendations for state leaders organized into the five domains from Part II. Included are examples from state leaders doing this work and links to key artifacts.

**Appendix A** provides additional background on clean energy tax credits and Elective Pay including an overview of the process for school districts to claim elective payments.

**Appendix B** provides an overview of the benefits of clean energy technologies for students and their communities.

## WHY CLEAN ENERGY? WHY NOW?

**C**lean energy makes good sense for school districts. Clean energy can substantially reduce the cost of operating school facilities, allowing districts to invest those savings in the classroom. Clean energy can also improve the health of students.

[Electric school buses reduce students' exposure to harmful diesel fumes](#) and heat pumps provide highly-efficient cooling to protect students from extreme heat. Enhancements to school facilities have demonstrated and meaningful impacts on [student health](#) and [learning, teacher retention](#), and [health care costs](#). Hot school days are [reducing in-person learning time](#)

and driving [educational inequities](#) in part because school buildings are not equipped to protect students.

Clean energy has always made long-term financial sense for schools, but the initial investment in these technologies was once prohibitive for many districts. Elective Pay alters that landscape. The new incentives significantly offset and even eliminate the higher installation costs for clean energy technologies – making clean energy both the most affordable to install and to operate in many cases.



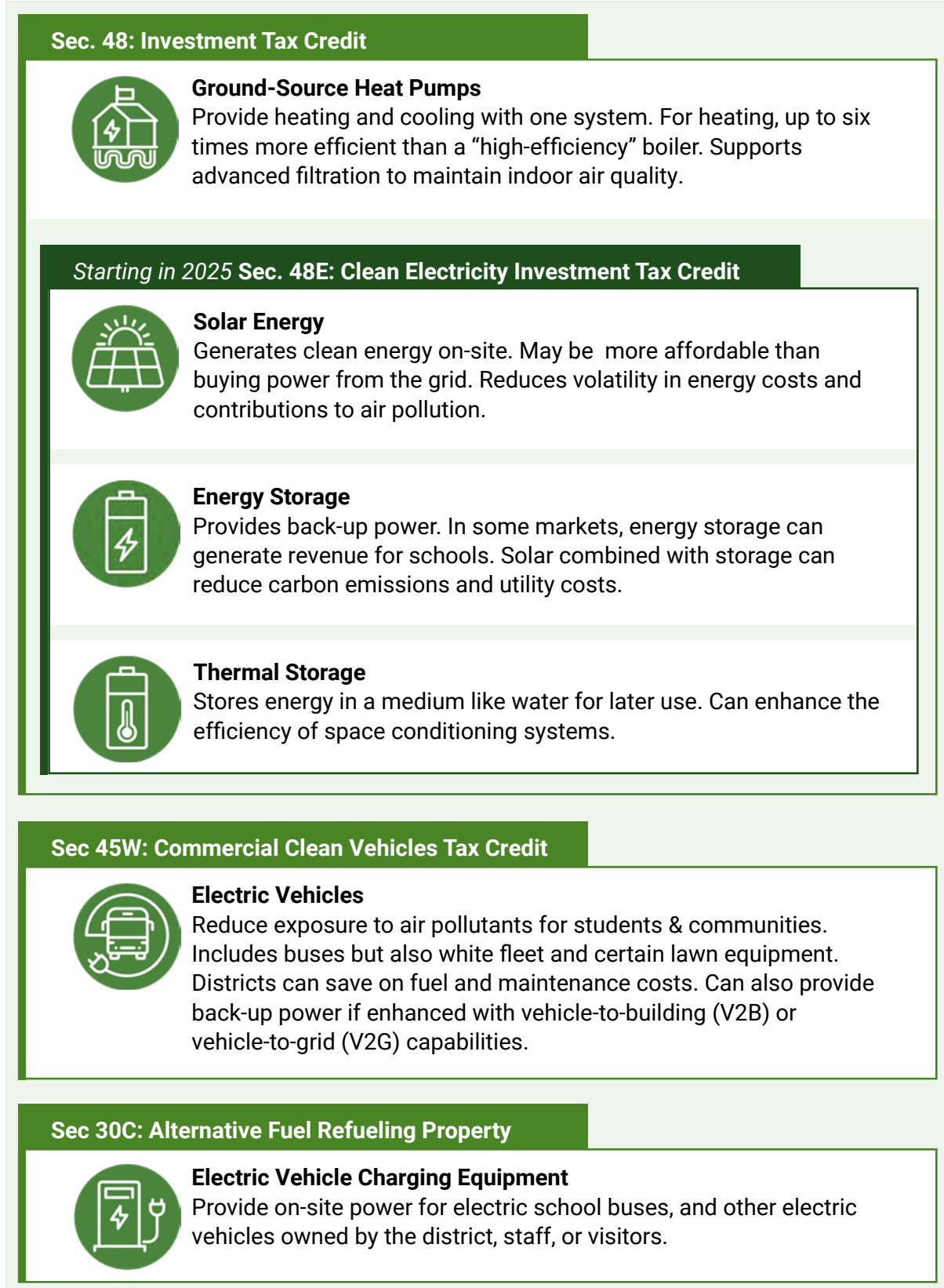
Stock Photo.

## WHAT FUNDING IS AVAILABLE?

Districts are eligible for substantial reimbursements when they install a range of clean energy technologies.

**Figure 1** on the next page contains the key clean energy technologies in use at school districts and the relevant tax provision.

Figure 1: Clean Energy Technologies that Qualify for Elective Pay



School districts can generally achieve reimbursements in the range of 30%-50% of project costs. Funding is uncapped and not subject to annual appropriations. School districts can claim reimbursements for as many eligible projects as they complete.

**Table 1** shows potential proceeds for a hypothetical district that pursues multiple clean energy technologies across their portfolio in a single year.

**Table 1: Reimbursements for Hypothetical School District**

Technology	Rate/Credit	Total Cost	Reimbursement
Three <b>ground-source heat pumps</b>	50% of costs	\$24,000,000	\$12,000,000
Five <b>solar energy systems</b>	40% of costs	\$7,500,000	\$3,000,000
One <b>energy storage</b>	40% of costs	\$750,000	\$300,000
Ten <b>electric school buses</b>	\$40,000 per vehicle	\$4,000,000	\$400,000
Five <b>EV charging equipment</b>	30% of costs	\$500,000	\$150,000
<b>Total cost</b>		<b>\$36,750,000</b>	
		<b>Total estimated reimbursement</b>	<b>\$15,850,000</b>

Bonus credits are available for projects located in [Energy Communities](#), a designation established by the Inflation Reduction Act for certain communities and project sites, including brownfield sites and those areas historically reliant on a fossil-fuel economy and with higher than average levels of unemployment. Certain [low-income communities and tribal lands](#) are eligible to compete for a [bonus credit](#) for solar projects. Additional credits are available for projects that source [domestically manufactured goods](#) and use U.S. steel and iron. In some cases, meeting the domestic content provision will be required to receive a credit.

Finally, many projects will need to meet [labor standards](#) that cover wages and the use of apprentices in order to maximize reimbursement amounts (see [Appendix A](#)). School districts may combine these federal reimbursements through Elective Pay with other sources of funding including tax-exempt financing and grants.

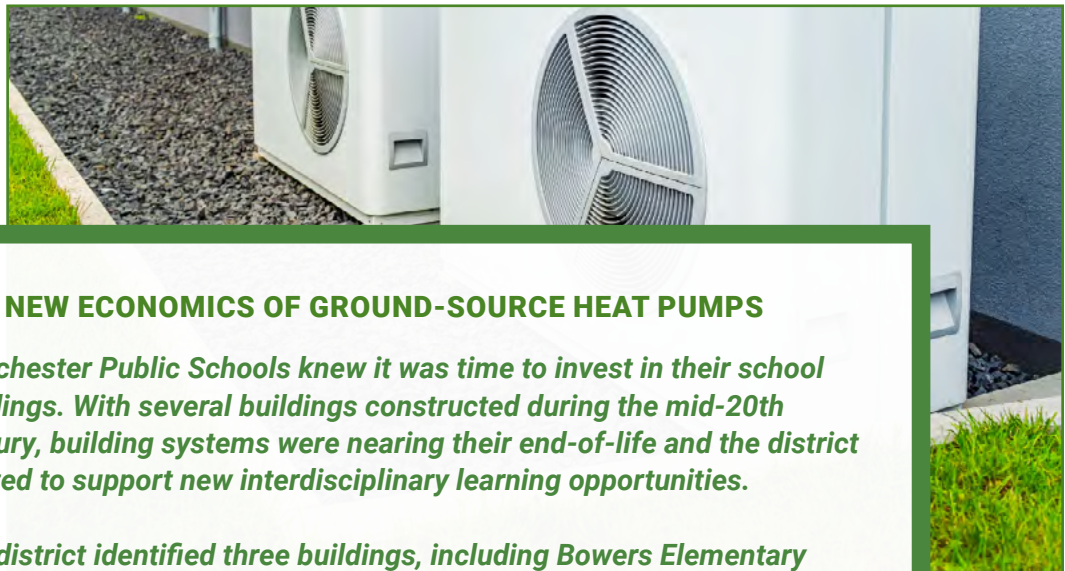
School districts can receive up to a total of 100% of the cost of the project through a combination of grants and a tax credit. Districts must own the eligible equipment in order to be eligible for a reimbursement.

## HOW DO SCHOOLS RECEIVE FUNDS?

School districts must first install the eligible clean energy equipment or, in the case of electric vehicles, purchase and take possession of the vehicles. Next, school districts or their municipality pre-file with the Internal Revenue Service (IRS) for all eligible equipment installed during the tax year (commonly, the entity’s fiscal year). Lastly, the filer (either the district or municipality) must complete a 990-T and other relevant IRS forms based on the equipment installed by the filing deadline (typically the 15th day of the fifth month

after the end of the entity’s fiscal year). Districts may hire professional services firms to assist with and complete filings with the IRS. Filings may be completed via paper or an e-Filing service. If e-Filing, districts can generally anticipate the IRS will process the return and payment within 45 days of the filing date but no sooner than the filing deadline.

For more detailed information, see [Appendix A](#) and consult the additional external resources provided.



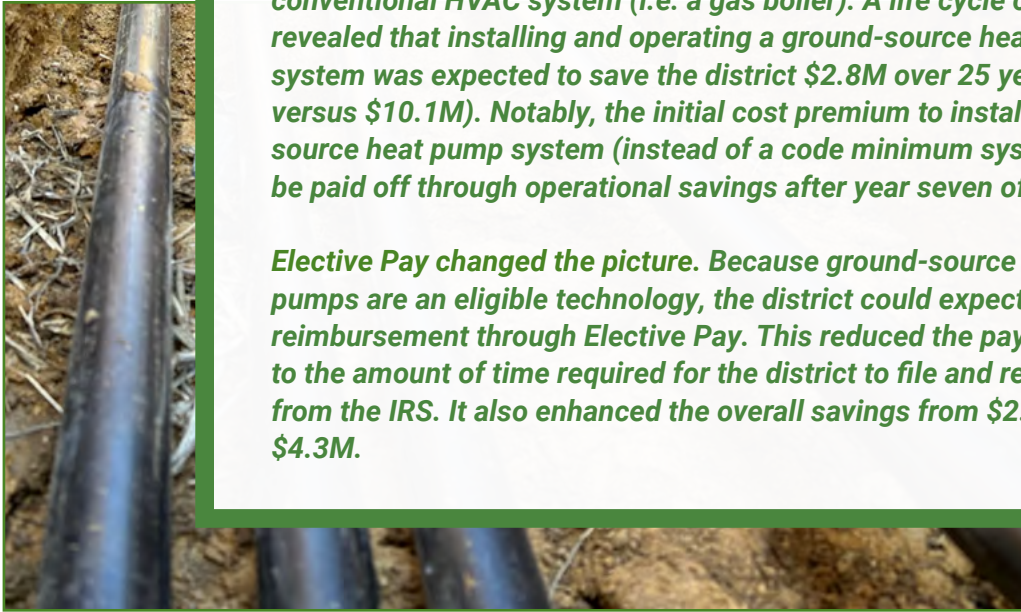
Stock Photo: Heat pumps.

### THE NEW ECONOMICS OF GROUND-SOURCE HEAT PUMPS

*Manchester Public Schools knew it was time to invest in their school buildings. With several buildings constructed during the mid-20th century, building systems were nearing their end-of-life and the district wanted to support new interdisciplinary learning opportunities.*

*The district identified three buildings, including Bowers Elementary School, to undergo major renovations. Working with TSKP and CMTA for architectural and engineering services, the district explored various options for updating HVAC systems and incorporating renewable energy to meet sustainability goals.*

*The district opted to retrofit the building with a new ground-source heat pump system which would provide the building with both highly-efficient heating and cooling with no on-site combustion of fossil fuels. In addition, the district installed 371 kW of solar energy providing a low-cost source of clean energy to meet their electricity needs.*

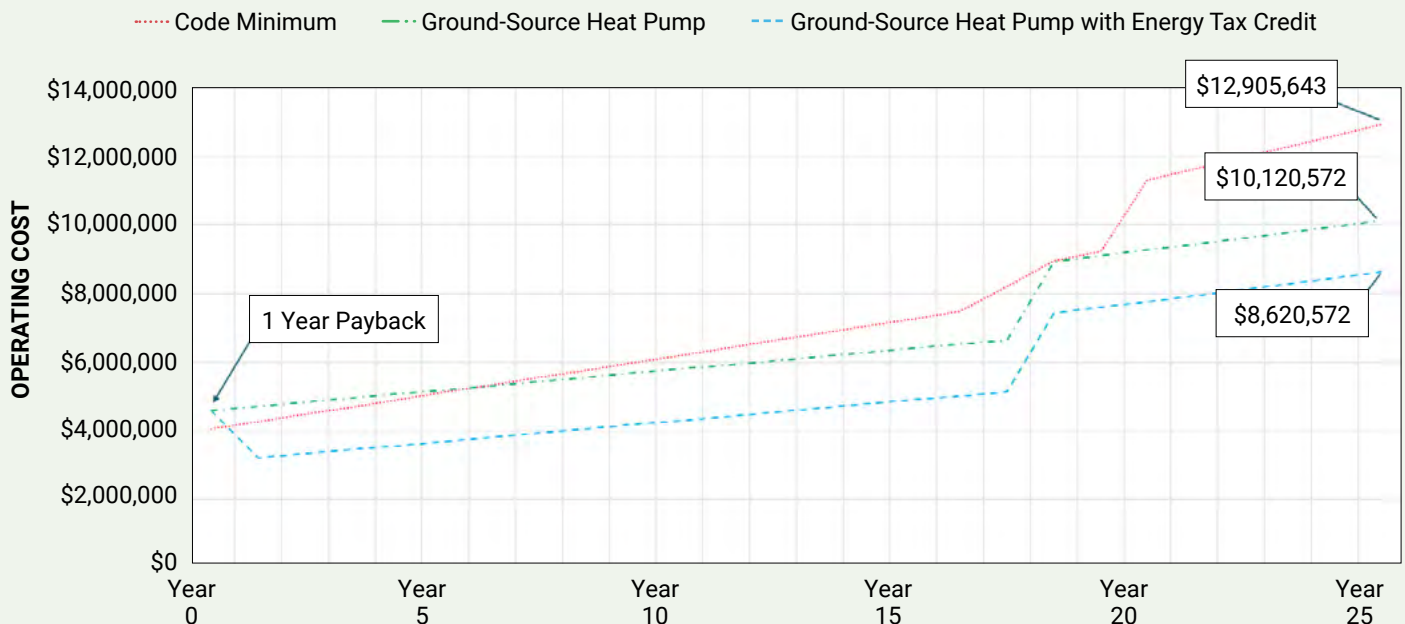


*In order to ensure the district was making a smart financial decision, the district evaluated the cost of installing and operating a ground-source heat pump compared to the cost of installing and operating a conventional HVAC system (i.e. a gas boiler). A life cycle cost analysis revealed that installing and operating a ground-source heat pump system was expected to save the district \$2.8M over 25 years (\$12.9M versus \$10.1M). Notably, the initial cost premium to install the ground-source heat pump system (instead of a code minimum system) would be paid off through operational savings after year seven of operation.*

*Elective Pay changed the picture. Because ground-source heat pumps are an eligible technology, the district could expect a ~\$1.5M reimbursement through Elective Pay. This reduced the payback period to the amount of time required for the district to file and receive funds from the IRS. It also enhanced the overall savings from \$2.8M to \$4.3M.*

Stock Photo: Ground-source heating pipes.

**Figure 2: Example of Life Cycle Cost Analysis for Ground-Source Heat Pumps**



## **S**State leaders can take action in five domains to ensure that schools in their states draw maximum benefit from Elective Pay.

- 1** **Expand awareness and understanding of clean energy technologies and Elective Pay.**
- 2** **Support planning and analysis to transition to clean energy.**
- 3** **Align and increase state investment in school infrastructure.**
- 4** **Foster supportive conditions for districts to transition to clean energy.**
- 5** **Build the capacity of district and state leaders to achieve a transition to clean energy.**

While many of these actions can “lift all boats,” state leaders can be intentional about bringing Elective Pay and the cost-saving clean energy technologies they support to key districts. Among those should be districts located in high-poverty communities with lower capacity. Since districts with high levels of capacity can and will access Elective Pay on their own, the measure of success for any state efforts should be the extent to which they close the opportunity gap for low-capacity districts.

The recommendations here are inspired by work underway in leading states and can be understood more deeply by exploring the referenced artifacts.



*Credit: monkeybusinessimages*

## 1

## EXPAND AWARENESS AND UNDERSTANDING OF CLEAN ENERGY TECHNOLOGIES AND ELECTIVE PAY.

**State leaders have a critical role to play in providing clear and credible information about Elective Pay and the technologies it supports within the context of schools.**

Many clean energy technologies are still new to district leaders. State leaders can motivate district action by making a case for clean energy that is framed in terms of the benefits to students and their communities (see [Appendix B](#)). In addition to expanding awareness and understanding of clean energy, the tax code represents an additional unfamiliar domain for school districts.

In order for the clean energy tax credits to stimulate clean energy uptake in schools, district leaders and the whole community of partners involved in school facilities must gain awareness, understanding, and trust that these incentives are applicable, accessible, reliable, and meaningful to schools. Throughout all of this work, state leaders should be mindful of the opportunity to lift up a diverse set of districts including small rural districts and those serving low-wealth communities.



*Alice West Elementary School. Arlington, VA.  
Courtesy of New Buildings Institute.*

## 2

**SUPPORT PLANNING AND ANALYSIS TO TRANSITION TO CLEAN ENERGY.**

**States can help districts make more of Elective Pay by investing in planning and requiring life cycle analyses. School construction projects require substantial capital and project planning.**

These processes are likely to be more complex in cases where districts are making the switch to clean energy. Districts should be encouraged and supported in re-examining their facilities master plans and capital plans through the lens of this multi-year federal funding opportunity. As projects are developed, states can assist districts in looking beyond “first costs” to life cycle costs that accurately illuminate the cost savings associated with clean energy technologies and the opportunity to defray costs through Elective Pay.

While facilities leaders and school business officers are critical players on the district staff, state leaders should pay special attention to the role of private sector partners. Project managers, engineers, architects, and owner’s project managers play an important and early role in shaping school facilities projects and the mindsets of district leaders about what technologies are viable and cost-effective.



Los Altos High School. Los Altos, CA. Courtesy of Tim Maloney / Technical Imagery Studios / Quattrocchi Kwok Architects

3

**ALIGN AND INCREASE STATE INVESTMENT IN SCHOOL INFRASTRUCTURE.**

**The federal investment in school facilities offered by Elective Pay provides an opportunity for states to reevaluate their own investment strategy.**

Leaders can evaluate how current state investments support districts in moving to clean energy and what opportunities exist to enhance that support, in particular for low-wealth districts. States need to understand how state funding formulas and reimbursement practices can operate most effectively in the context of Elective Pay. State leaders are well-positioned to develop and deepen partnerships that can

unlock and organize private sector and utility capital investment in clean energy technologies for school districts. Governors seeking to make their mark can harness Elective Pay to inspire an ambitious state commitment to healthy, resilient, efficient schools for all children.

4

**FOSTER SUPPORTIVE CONDITIONS FOR DISTRICTS TO TRANSITION TO CLEAN ENERGY.**

**State agencies and regulatory bodies can accelerate the transition to clean energy at schools through the goals, standards, and limits they set and the investments they choose to make, such as in workforce development.**

The consequences of these state actions are now amplified by the offer of substantial co-investment by the federal government. Conversely, districts may face roadblocks within states that slow down their transition to clean energy and, as a consequence, also dampen their ability to collect reimbursements through Elective Pay. Utilities and public utility commissions are

critical actors given their role in setting the rules of the road for how clean energy assets, like solar, are integrated into the grid and how the owners of these assets are compensated. Public utility commissions can direct utilities to take actions that support district customers in unlocking Elective Pay opportunities.

5

**BUILD THE CAPACITY OF DISTRICT AND STATE LEADERS TO ACHIEVE A TRANSITION TO CLEAN ENERGY.**

**State leaders can invest to address the immense need for technical assistance to help districts make the most of Elective Pay and, more broadly, position districts to advance the process of transitioning to clean energy.**

Local school districts vary widely in their situations and resources, but few possess both the personpower, in general, and the specific skills to bring new technologies to scale. In the absence of clear guidance and close support, districts are more likely to extend their dependence on familiar, less efficient equipment.

States can invest directly in district capacity through professional development, salary support for key roles, and convenings that build relationships and support knowledge

transfer. Governor’s offices can hold agencies accountable for developing their own internal capacity related to Elective Pay and devising appropriate strategies to support districts.

**Table 2** summarizes how the various recommendations within each domain might be prioritized or relevant to state leaders in different roles – and highlights the opportunities for leaders to collaborate effectively across organizations and actions to drive this transition.



*King Open School. Cambridge, MA. Courtesy of Sara Ross.*

Use Table 2 to find the actions that are relevant to you.

Key for State Leadership Role Icons












 State Agencies	 Utilities & Public Utility Commissions
 State Legislators	 Green Banks
 Governor's Offices	 Professional Associations

Table 2: Mapping Suggested Actions to State Leadership Roles

1 Expand awareness and understanding of clean energy technologies and Elective Pay	
<a href="#">1.1</a> Identify and support the first cohort of qualified projects	
<a href="#">1.2</a> "Broadcast" through statewide communication channels	
<a href="#">1.3</a> Put Elective Pay on the agenda in the education ecosystem	
<a href="#">1.4</a> Target outreach to key districts	
<a href="#">1.5</a> Highlight first movers	

2

Support planning and analysis to transition to clean energy.

<a href="#">2.1</a> Require and support life cycle cost analysis	SA SL GB
<a href="#">2.2</a> Support consideration of energy and Elective Pay in planning	SA SL U GB GO
<a href="#">2.3</a> Fund decarbonization roadmaps for districts	SA SL U GO

3

Align and increase state investment in school infrastructure.

<a href="#">3.1</a> Ensure Elective Pay does not reduce state contributions to school construction projects	SA SL GO
<a href="#">3.2</a> Avoid crowding-out federal credits	SA SL GO
<a href="#">3.3</a> Require consideration of Elective Pay to access state school infrastructure bond funds	SA SL
<a href="#">3.4</a> Ensure projects have access to bridge financing	SA SL GB GO
<a href="#">3.5</a> Enhance or establish state investment in school facilities	SA SL GB GO
<a href="#">3.6</a> Create financial and programmatic supports for heat pump retrofits	SA SL GB GO
<a href="#">3.7</a> Support public ownership of solar	SA SL GB GO
<a href="#">3.8</a> Enable private sector investment in school facilities	SA SL GB GO

[3.9](#) Encourage utility co-investment and collaboration

SA SL U

[3.10](#) Replicate Elective Pay as a state program

SA SL

GO

4

Foster supportive conditions for districts to transition to clean energy.

[4.1](#) Grow and expand registered apprenticeship programs (RAP)

SA SL

PA GO

[4.2](#) Review utility landscape for policy alignment and transparent access to key clean energy information

U

GO

[4.3](#) Incentivize high-performance buildings

SA SL U

5

Build the capacity of district and state leaders to achieve a transition to clean energy.

[5.1](#) Build knowledge and staff capacity among state agencies

SA SL U GB PA GO

[5.2](#) Coordinate technical assistance and support capacity-building in districts

SA SL U GB PA GO

[5.3](#) Create dedicated leadership roles

SA

GO

[5.4](#) Assemble school facility data

SA SL U

1

EXPAND AWARENESS AND UNDERSTANDING OF CLEAN ENERGY TECHNOLOGIES AND ELECTIVE PAY.

1.1 Identify and support the first cohort of qualified projects



Districts across the country installed eligible clean energy equipment in 2023 and 2024. Many of these projects were planned and completed without any awareness of the possibility for Elective Pay reimbursement. Without outreach to these districts, tax credits may go unclaimed.

State leaders can build early momentum and excitement around this opportunity by proactively identifying those districts with the first cohort of Elective Pay eligible projects, and ensuring they have the support they need to successfully complete the process with the IRS.



Stock Photo.



The Minnesota Department of Commerce's Solar for Schools program maintains a list of grantees. By reviewing the dates those solar energy systems were put into service, and which school districts own their solar energy systems, the Department can identify which districts also qualify for federal reimbursement through Elective Pay and provide targeted outreach and support. In Minnesota, all Solar for School recipients were invited to a technical assistance session to learn more about Elective Pay and receive guidance for navigating the reimbursement process with the IRS.

The Michigan Infrastructure Office's Technical Assistance Center (MIO TAC) which has historically helped communities identify and apply for federal grants expanded its offerings to include support for Elective Pay.



The EPA's [Clean School Bus program](#) provides rebates and grants to school districts to purchase electric school buses and associated charging infrastructure. These fleet electrification projects also qualify for federal tax credits (Sec 45W Commercial Clean Vehicle credit, and Sec 30 Alternative Fuel Vehicle Refueling Property credit). State Departments of Transportation and other state agencies, including energy offices and education agencies, should perform outreach to school districts to ensure they understand they can stack EPA Clean School bus awards with federal tax credits for buses they received or charging infrastructure installed in 2023 or later.

## 1.2 “Broadcast” through statewide communication channels



Governor’s offices, legislators, utility administrators, agency staff, and leaders in professional organizations such as superintendents and school business officers associations are all well-placed to build awareness and instill confidence in the opportunity for schools with Elective Pay.

These leaders should activate the many channels available to them (e.g. press releases and press conferences, speeches, convenings, etc.) to broadly disseminate [credible information](#) about Elective Pay, how schools can take advantage, and where district leaders and other stakeholders can find assistance. State leaders will likely find eager allies among nonprofit, PTA, and youth leaders to spread the message and information about Elective Pay throughout their communities.

*U.S. Senator Ed Markey’s office held a [webinar](#) on the Elective Pay opportunity for Massachusetts schools.*

Hearing messages about Elective Pay from their own state leaders will engage local decision-makers differently than receiving them only from federal sources or national reports. The power of this opportunity lies in state leaders’ familiarity and proximity to district decision-makers, and their ability to relate the opportunity to local needs and context. For example, schools in Massachusetts that lack cooling will derive enormous benefits from a transition to heat pumps and can receive additional financial and technical support from Mass Save, the state’s energy efficiency program.

Courtesy of bpperly via iStock.



The Pennsylvania Governor's Office and the U.S. Department of Treasury undertook a [roadshow](#) to engage and educate traditionally tax-exempt organizations (including schools) on Elective Pay and its implication for capital planning.

The Wisconsin Department of Public Instruction co-hosted a [webinar](#) about clean energy and Elective Pay for school leaders with local partners Forward Together Wisconsin and UndauntedK12.

### 1.3 Put Elective Pay on the agenda in the education ecosystem



State leaders should ensure that the professional associations for superintendents, school board members, business officers, facilities managers, and student transportation associations are all aware of the opportunities to access clean energy tax credits through Elective Pay.

The annual meetings of state education associations are high-leverage venues for state agency staff and their partners to increase awareness and interest by describing the benefits of clean energy technologies and explaining how Elective Pay operates within the local context. They also provide an opportunity to invite experts to validate the technology and opportunity, as well as to showcase local districts that have successfully deployed the technology or received reimbursement through Elective Pay.

Pennsylvania's Critical Investments team in the Office of the Governor [presented about Elective Pay](#) at a Spring 2024 meeting of the Pennsylvania Association of School Business Officers (PASBO).

See a presentation from Wisconsin [WASBO Facilities Conference](#) in February 2024 delivered by design & construction partner, [Hoffman Planning, Design & Construction](#) and UndauntedK12.

Explore a [September 2024 presentation](#) at the Arizona Association of School Business Officials (AASBO).

The [May 2024 conference](#) of the Association of School Business Officials in Maryland included [a session](#) led by the [Maryland Interagency Commission on School Construction](#), the [Maryland Energy Administration](#) and UndauntedK12.

## 1.4 Target outreach to key districts



While all districts will benefit from education about Elective Pay, certain districts are particularly high priority for targeted and timely outreach. States should devise a plan for direct, in-person outreach to high-poverty, low-capacity districts. While these districts have much to gain from cost-saving clean energy technologies, their lack of capacity to seek out and explore new funding opportunities leaves them at a disadvantage.

Districts located in an [Energy Community](#) are eligible for an additional 10 percent reimbursement for solar, energy storage, thermal storage, and ground-source heat pumps. In these communities, the financial case for clean energy will be particularly strong. State agencies should identify all the schools located in Energy Communities in the state and ensure they understand this particular opportunity to claim additional funding.

Schools located in environmental justice communities are vital beneficiaries of technologies that can improve air quality and resilience. They may also be excellent candidates to receive other philanthropic

grants or state funding to help offset upfront costs and/or defray the remaining project costs. State agencies should engage in direct outreach to these districts and provide [grant writing assistance](#), or other support to enable school districts to design and fund projects that can be supported in part by clean energy tax credits. The [Energy Justice Mapping Tool for Schools](#) and the [Climate and Economic Justice Screening Tool](#) can both be used by states to identify schools serving vulnerable communities. Outreach can also be prioritized to districts eligible for the [Alternative Fuel Vehicle Refueling Property Credit \(30C\) tax credit](#), which targets low-income and non-urban areas and schools eligible for the [Low-Income Community Bonus Credit](#).

Districts currently building new schools or performing major modernizations of existing schools (including HVAC replacements) are an urgent target for outreach. Given the substantial tax credit available for ground-source heat pumps, every district investing in new HVAC equipment should evaluate this option. Districts currently making 30-

year investment decisions may miss the opportunity not only to access these federal funds, but also to install a highly-efficient HVAC system that can deliver low operating costs, provide heating and cooling, and reduce pollution.

The following state reports could guide outreach to districts currently making investment decisions, many of which should likely consider the implications of the availability of clean energy tax credits.

The Office of the State Comptroller in New York identifies school districts [designated in fiscal stress](#). These districts could benefit from state support to access cost-saving clean energy technologies.

The [School Facility Program Funding database](#) from the California's Office of Public School Construction could be used to guide timely outreach to districts at various stages of project development, and especially those facing financial hardship.

Referenda information is reported by school districts and posted on the [Referenda Information page](#) of Wisconsin's Department of Public Instruction.

The [Division of Capital Construction](#) within the Colorado Department of Education maintains a [list of state investments](#) in school construction projects through its Building Excellent Schools Today program.



Benjamin Banneker High School. Washington, D.C. Courtesy of Perkins Eastman.

## 1.5 Highlight first movers



A powerful lever for change is highlighting positive examples from other area school districts. Both the clean energy technologies and the new Elective Pay reimbursement mechanism benefit from validation by other district leaders. School districts can share performance data and energy cost savings for relevant clean energy technologies, validating that the technologies are both technically and financially viable. Leaders incorporating Elective Pay into their decision-making can share artifacts from their analysis and decision-making processes (e.g. spreadsheets, presentations). Lastly, the first districts to complete the process with the IRS and receive reimbursement through Elective Pay will serve as key validators of the new policy and payment mechanism.

State leaders can collaborate with nonprofits to cultivate these three types of districts leaders mentioned above and provide a platform for their experiences to be shared with other district leaders through awareness-building and outreach activities (see #2, #3, and #4 outlined above). State leaders can create publications that summarize the opportunity for schools and share case studies including anticipated Elective Pay reimbursement. The Fact Sheets to the right are models that states could replicate to highlight local projects.



Stock Photo

*The White House released a [Fact Sheet for Sustainable and Healthy Schools](#), which includes examples of schools that are actively pursuing tax credits for clean energy investments with anticipated Elective Pay reimbursement.*

*In April 2024, The White House convened its first-ever [Summit on Sustainable and Healthy K-12 School Buildings and Grounds](#) which highlighted schools districts who are leading on this work.*

*UndauntedK12 has also produced [fact sheets](#) and [stories](#) of districts leveraging Elective Pay.*

States can also highlight districts leading the way on clean energy technologies through webinar and conference sessions.

*The Wisconsin Department of Public Instruction (DPI)'s [webinar on The Inflation Reduction Act & Schools](#) featured an Energy Manager from the Sun Prairie Area School district who discussed the district's energy efficiency program that includes ground-source heat pumps.*

*The Massachusetts School Building Authority (MSBA)'s [roundtable "Decision-Making for the Next Decade"](#) highlighted how the availability of Elective Pay influenced decision-making for the Elmwood Elementary School building project in Hopkinton.*

When highlighting examples of early movers, states can also work to identify districts that have directed investments toward communities of color and low-income communities.

As more projects receive media attention that emphasizes the new federal funding available through Elective Pay, states and professional associations can play a key role in sharing and amplifying these stories of early adopters across their state.



Courtesy of TW Farlow via iStock.



This NPR/KNXX Public Radio Story shares how [Seattle Public Schools](#) anticipated receiving \$7.5M from the IRS for installing ground-source heat pumps and solar panels at 3 elementary schools in 2023.



The [Salt Lake City School District \(SLCSD\)](#) focused its electric school bus deployments in a community that is disproportionately impacted by air quality and environmental justice issues like hazardous waste.



Energy News reports how [St. Paul, Minnesota Public Schools](#) is installing heat pump systems at schools ranging from small neighborhood K-5s to comprehensive high schools. Anticipating federal reimbursements through Elective Pay and modeling its reduced energy costs, the district estimates that the high school project will save \$7M over 30 years while the elementary projects will pay for themselves within a decade. Meanwhile, an [AP report](#) focuses on the health benefits for students as discerned through the experience of school nursing staff.



Courtesy of SolStock via iStock.



Local reporting describes how, after installing solar panels at two sites in 2023, the community school district in [Plymouth, Indiana](#) saw immediate savings on its energy bills – including, at one of the schools, zero expense for electricity over a four-month period. “When you are looking at almost \$138K a year that you can take off of your operating costs and have a 30-year investment with a 7-year payback, this is the business side of school,” said the district’s facilities manager.

At a [Department of Energy webinar](#), Clark Seipt, the Director of Sustainability for Loudoun County Public Schools in Virginia, shared her experience working with partners to execute on clean energy projects in the district that are expected to generate a \$9-10M reimbursement through Elective Pay.



Stock Photo: Department of Energy.

2

SUPPORT PLANNING AND ANALYSIS TO TRANSITION TO CLEAN ENERGY.

2.1 Require and support life cycle cost analysis



Life cycle cost analysis refers to the practice of analyzing the upfront costs, as well as the operations, maintenance, and replacement costs over an extended period (often 25 but sometimes as long as 50 years). Life cycle cost analysis is particularly useful when trying to compare the financial implications of different equipment options for example in a new school construction project, HVAC replacement, or new vehicle purchases.

In the case of HVAC systems, a life cycle cost analysis can reveal how highly efficient machines like ground-source heat pumps can save districts money. The [Sun Prairie School District](#) in Wisconsin estimates that the district has generated over \$15 million in operating cost savings over the last 18 years by investing in energy efficiency, and converting many of their school buildings to ground-source heat pumps. These savings means funds can be redirected to other costs like teacher salaries, or can be used to close budget gaps or reduce local taxes.

One of the many benefits of moving to all-electric HVAC systems is the ability for schools to operate those machines using low-cost, fixed-cost solar energy that can be produced on-site. Since solar energy systems are also eligible for Elective Pay, schools can “double-dip” by claiming tax credits for both a highly-efficient HVAC

option and a solar energy system that provides low-cost electricity to operate it.

State agencies that financially support school construction can require life cycle cost analyses that include evaluation of ground-source heat pumps and incorporate Elective Pay. Furthermore, in utility territories where solar energy systems are viable, states should require and support districts in incorporating solar into the analysis. States can encourage increased uptake of solar simply by compelling districts to perform a financial analysis that incorporates Elective Pay.



*Maryland's Interagency Commission on School Construction requires that districts applying for state funding perform a life cycle cost analysis of at least three HVAC systems. [This example from Deer Park Elementary School in Baltimore County](#) shows that ground-source heat pumps had the lowest life cycle costs of any of the four systems analyzed. This analysis did not include potential reimbursements through Elective Pay.*

## 2.2 Support consideration of energy and Elective Pay in planning



While only [4 out of every 10 school districts](#) in the country have a long-term facilities plan, these plans are critical to executing on school facility improvements. A long-term facilities plan, along with a capital plan to support its implementation, is critical to a district’s ability to make the most of Elective Pay. Districts seeking to install solar, retrofit an aging HVAC system with a ground-source heat pump, or begin a transition to electric school buses will need to contend with existing site conditions,

space utilization, and financial resources to make these investments a reality.

States can support districts in creating facilities plans that incorporate energy costs as well as the opportunity to reduce costs through investments in clean energy technologies with Elective Pay. States can prioritize support and technical assistance to certain districts such as those with low capacity or those experiencing severe fiscal stress.

*California’s new state school infrastructure bond, [Proposition 2](#) (formerly [AB 247](#)) which passed in November 2024, requires that districts applying for funding from the School Facilities Program submit a facilities master plan as a condition of participation. State leaders responsible for implementation have an opportunity to explicitly require, support, and/or guide districts to include consideration of Elective Pay as they update their long-term facilities plans to access state bond funds.*

Lastly, states can take on their own planning efforts that can guide effective deployment of clean energy at school sites and investigate the opportunity to harness Elective Pay to achieve state goals. State energy offices and utilities can support districts in paying special attention to where the clean energy technologies supported by Elective Pay may be particularly suitable or beneficial. For example, states could compile and make available existing data on soil suitability for ground-source heat pumps, or identify areas of the electrical grid that would benefit from siting energy storage.

*In Massachusetts, Senator Comerford and Representative Domb sponsored “[An Act Establishing a Green and Healthy Schools Working Group and Implementation Plan](#)” to create a working group that would devise a plan for implementing and enforcing green and healthy school standards across the state. This plan could incorporate Elective Pay as a key funding source.*

*In California, Senator Lena Gonzalez sponsored [SB 1182 \(Master Plan for Healthy, Sustainable, and Climate-Resilient Schools\)](#) which would require the state to develop priorities and milestones for health, resilience, and decarbonization of public school campuses. The bill specifically mentions the need to “position California schools to take full advantage of incentives and funding for decarbonization and climate adaptation within relevant federal legislation, including the Infrastructure Investment and Jobs Act and Inflation Reduction Act of 2022.”*



Stock Photo: California State Capitol.

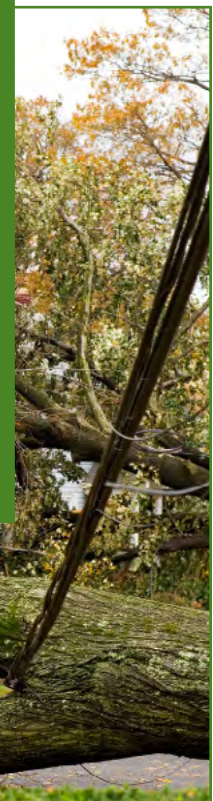


**PLANNING AHEAD ALLOWS DISTRICT TO RESPOND TO DISASTER**

*On September 1, 2021 plans for the first day of school at Fort Washington Elementary in Pennsylvania were disrupted when a tornado created by strong winds from Hurricane Ida touched down. The school was badly damaged.*

*Amidst this crisis, the Upper Dublin School District leaned heavily on a facility assessment and planning process that had just been completed. With this planning work in hand, the district was well-prepared to move quickly to conceptualize a comprehensive approach to address existing issues in multiple buildings as well as new repairs necessitated by the storm damage.*

*[Fort Washington Elementary](#) completed installation of a new ground-source heat pump system in August 2023 and is pursuing Elective Pay reimbursement for the completed work.*



Stock Photo: Hurricane damage.



### 2.3 Fund decarbonization roadmaps for districts



To make the most of the Elective Pay opportunity, districts will benefit from having a decarbonization roadmap. These plans identify the sources of greenhouse gas emissions in the district portfolio and map out in time and with estimated costs the pathway to replacing fossil-fuel machines with all-electric alternatives. These plans pay close attention to replacement opportunities, site suitability, and interdependencies between various building projects.

New Buildings Institute’s [Decarbonization Roadmap Guide for School Building Decision Makers](#) includes essential tools (including templates, spreadsheets, and instructions) for districts to undertake this work. Even for large districts with a substantial team focused on sustainability, these plans are typically completed by consultants with expertise in sustainability. Depending on the size of the portfolio and the extent to which they go beyond a simple desktop analysis, the cost for these consultant-developed plans may be significant.

States can ensure that districts have access to technical assistance to compile decarbonization roadmaps, with a particular emphasis on prioritizing underserved school districts. Roadmaps should incorporate consideration of Elective Pay into the analysis of viable technology options and available funding sources. Given the cost of this new activity, legislators are likely to play a key role by providing adequate funding.



Courtesy of Sara Ross.



*In New York, NYSERDA provides assistance to districts looking to transition their fleet to electric vehicles through the [FlexTech program](#). Districts can also receive energy studies of buildings through the [Clean Green Schools Initiative](#).*

*In Massachusetts, the Massachusetts Clean Energy Center’s [Building Electrification Transformation Accelerator](#) provides commercial building owners – including school districts – with no-cost technical assistance from a selected vendor to perform an analysis of building electrification options.*



### EXAMPLES OF SCHOOL DECARBONIZATION ROADMAPS

*In Wisconsin, the [Middleton-Cross Plains Area School District](#) engaged [Slipstream](#) to devise a decarbonization roadmap to guide future investments in school facilities.*

*In Massachusetts, Arlington Public Schools issued an [RFP for an Electrification and Air Quality Master Plan](#) to explore electrification options for six existing elementary schools. [The report](#), produced by [CMTA](#), provided cost estimates and incorporated utility and clean energy tax credits to guide informed decision-making. The study revealed that once the state and federal incentives were incorporated, ground-source heat pumps were estimated to be the most affordable option to install, and had the lowest 30-year life cycle cost.*



John Lewis Elementary School, Washington, DC. Credit: Courtesy of Perkins Eastman.

3

ALIGN AND INCREASE STATE INVESTMENT IN SCHOOL INFRASTRUCTURE.

3.1 Ensure Elective Pay does not reduce state contributions to school construction projects



In some states, school construction projects receive state contributions. States should review the formulas that determine state funding to ensure that Elective Pay will not reduce state contributions. Mechanically, this can be achieved by ensuring that expected Elective Pay reimbursements count exclusively toward the local share of a school construction project (Scenario B in **Table 3**) rather than reducing the cost-basis on which the state calculates its own share (Scenario A). In states with progressive funding formulas, this is particularly important, as lower-wealth districts will be disproportionately penalized for attracting federal funds.

*The Massachusetts School Building Authority modified its policy regarding third-party funding so those contributions do not reduce the cost-basis for state facilities funding.*

*In the 2023 legislative session, Connecticut lawmakers (see Section 118 of bill) exempted all federal funds (including Elective Pay reimbursements) from reducing the cost basis on which state shares in school construction projects are calculated.*

**Table 3: Examples of Different Treatment of Elective Pay in Determining State Aid for School Construction**

	Scenario A	Scenario B
Construction cost	\$50,000,000	\$50,000,000
Elective Pay reimbursement	\$3,500,000	\$3,500,000
Net cost	\$46,500,000	n/a
State share (%)	70%	70%
Local share (%)	30%	30%
State share (\$)	\$32,550,000	\$35,000,000
Local share (\$)	\$13,950,000	\$11,500,000
<b>Net change to local share</b>		<b>-\$2,450,000</b>

### 3.2 Avoid crowding-out federal credits



In some states, districts receive substantial facilities grants from state authorities. These funds are essential to achieve adequate and equitable levels of investment; but, the advent of Elective Pay significantly alters the context for state funding. Now, there is a danger that a state grant could crowd-out federal funds. (See [Appendix A](#) for more context on the IRS' no excess benefit rule.) States could review their school facilities programs and adopt procedures and timelines that mitigate the potential for limited state funds to crowd-out unlimited federal funds through Elective Pay.



*In 2021, the Minnesota state legislature established the [Solar for Schools Grant program](#) which is administered by the Department of Commerce, Division of Energy Resources. Since its inception, the program has more than doubled the number of solar schools in the state through grants that offset up to 40–70% of the cost to install a solar energy system. With the arrival of Elective Pay, these projects are now eligible for substantial federal reimbursement in addition to their Solar for Schools grant. For example, a solar array on a Minnesota school with an installation cost of \$117,000 might be eligible for an elective payment of \$35,100. A state grant in the amount of \$113,000 however would reduce that elective payment to only \$4,000 crowding out \$31,100 in federal funding for Minnesota.*

*Minnesota has an opportunity to revisit its grant formula to account for the additional incentives for each solar project, which could allow the state to fund more projects.*



Aerial view, solar panel array at Rupert Elementary and Western Greenbrier Middle. Greenbrier County School District, West Virginia. Courtesy of CMTA.

### 3.3 Require consideration of Elective Pay to access state school infrastructure bond funds

SA SL

[Thirty-one states](#) issue or support bonds to fund investments in school infrastructure. Those states can condition approval of state funding on evidence of consideration of Elective Pay. States could also require public reporting on the use of Elective Pay for school projects that utilize state bond funding.

Stock Photo: Idaho Capitol.



*In March 2024, Idaho’s Governor Brad Little signed into law [HB 521](#) which will invest \$1.5 billion into school facilities – \$1 billion of which will be bonds backed by sales tax revenue. The Department of Education, which is responsible for distributing the funds, could require consideration of Elective Pay funding within districts’ applications. The Department could also be required to report back to the legislature on how the state investment was able to leverage additional federal dollars through Elective Pay.*

### 3.4 Ensure projects have access to bridge financing

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Since Elective Pay is a reimbursement, districts must have access to upfront capital to plan and complete projects. Effective bridge financing solutions will be those that complement long-term financing for clean energy projects and are designed for the context in which schools are making purchase decisions about clean energy options.

For example, district leaders can select a ground-source heat pump system in the context of a new construction or major modernization project. However, ground-source heat pumps may have higher upfront

installation costs than more conventional technologies, such as gas boilers. While Elective Pay can make ground-source heat pumps economical, districts that do not have access to upfront capital may be at a disadvantage. Access to low-cost financing to cover the initial installation costs can remove this barrier and enable schools to gain the longer-term savings and performance benefits from ground-source heat pumps.

States can help districts manage their cash flow by understanding what opportunities already exist for low-cost

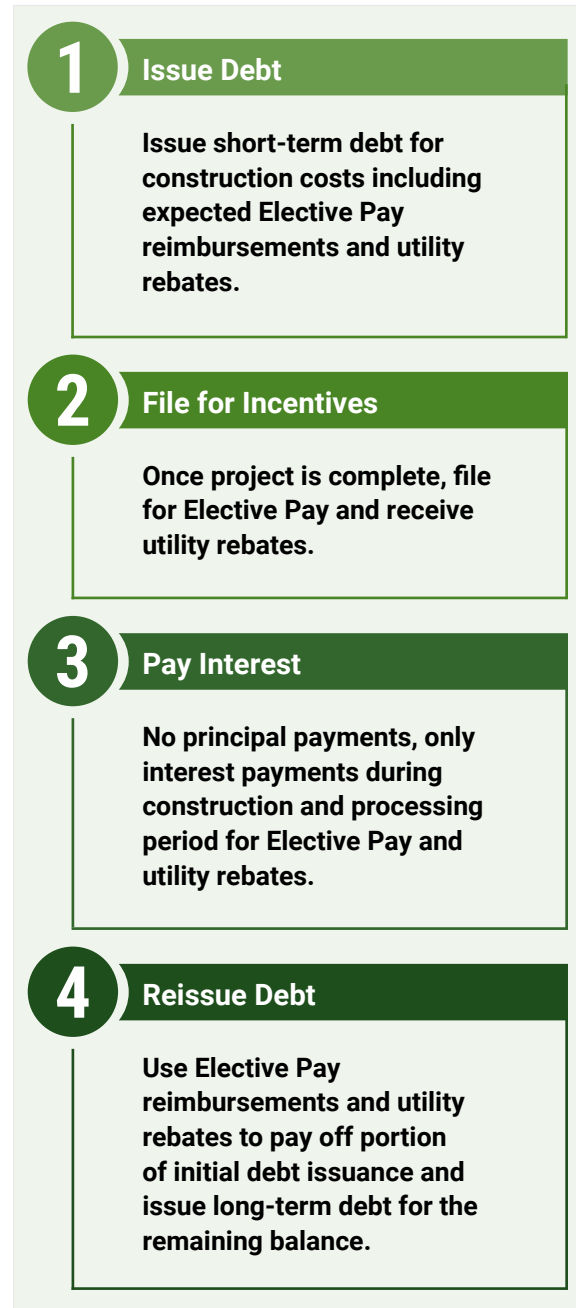
school construction financing, and what gaps remain. For example, in the case of school districts that are already accessing the municipal bond market for multi-year or project-level funding, district leaders can work with bond counsel to structure repayment of the bonds to incorporate a prepayment with the reimbursement from Elective Pay. In some cases, districts may elect instead to use short-term borrowing with some form of anticipation notes (e.g. BANs).

In order for district and municipal officials to use these existing financing mechanisms while also navigating conversations about taxpayer debt obligations, these officials and their bond counsel need to develop confidence in the availability of Elective Pay, the expected amount and timing of reimbursement.

State Departments of Revenue can determine what options districts have under state law to use alternatives such as grant, revenue, and bond anticipation notes to bridge expected Elective Pay proceeds. Departments of Revenue can then help to educate municipal finance officials about how they can use these existing financing mechanisms to bridge Elective Pay reimbursements through ongoing training and support.

*The [Metropolitan Area Planning Council](#), [Massachusetts Federal Funds and Infrastructure Office](#), and the [Government Finance Officers Association](#) co-hosted a webinar for municipal officials entitled “Making Dollars and Cents of Direct Pay” (see [Webinar Recording](#) and [Presentation Slides](#)).*

**Figure 3: Potential Use of Anticipation Notes to Bridge Elective Pay**



Where schools are not already accessing the municipal bond market and are instead relying on capital budgets or grant dollars, finding bridge financing for the tax credits may be an important piece of the puzzle. Green banks may have both the competencies and mission alignment to bring new financial products to the market. State green banks should ensure that there are financial products designed to meet the needs of school construction projects. State legislators could consider providing a financial backstop to Elective Pay for all or selected school districts to reduce the risk associated with this federal funding source.

*The [Rhode Island Infrastructure Bank](#) offers long-term financing for energy efficiency and renewable energy projects on concessionary terms. In particular, schools can access the [Efficient Buildings Fund](#), a revolving loan fund that provides below-market financing for up to 20 years or the lifetime of the asset.*



Courtesy of Allison Shelley via EDUimages.

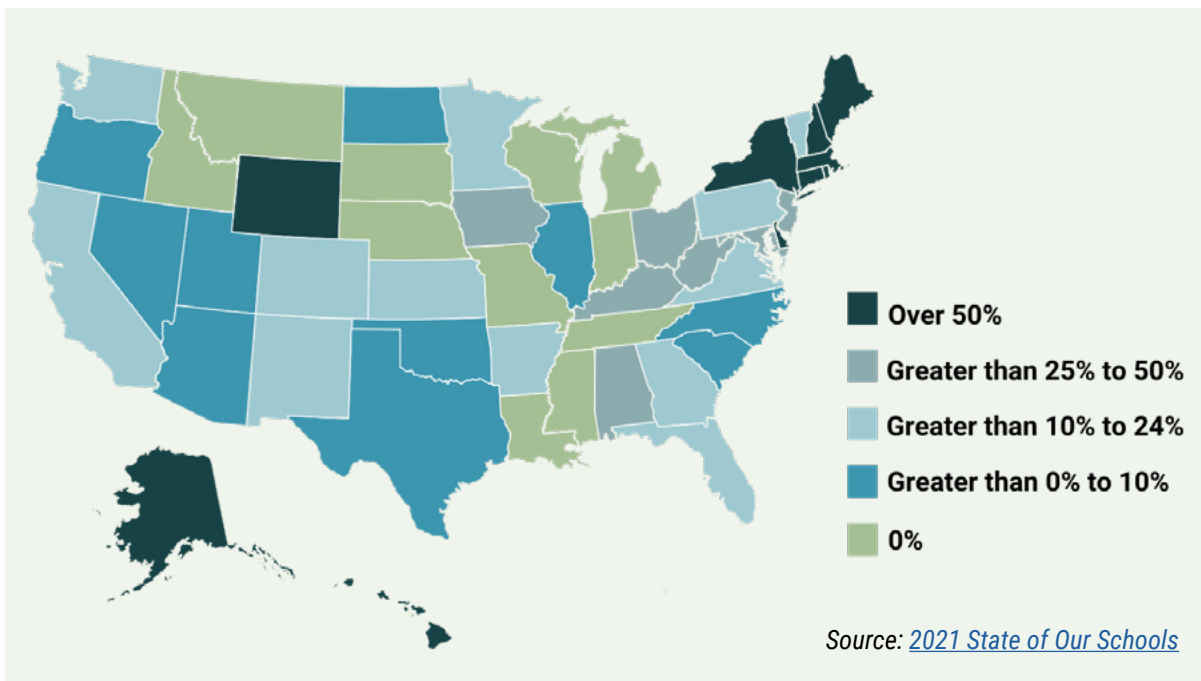
### 3.5 Enhance or establish state investment in school facilities



Elective Pay creates a rationale for states to reevaluate their level of investment in school facilities. After all, state investments will now go further as they can help districts unlock federal reimbursements through Elective Pay. The [2021 State of Our Schools](#) reports that between FY09-19, states were responsible for 22 percent of capital

expenditures in school facilities. This varies widely from state to state, with some states providing no funding for school facilities. Without state funding, local districts, especially those in low-wealth communities, are less likely to undertake the capital projects that would unlock Elective Pay.

**Figure 4: Levels of State Contribution to District School Construction Capital Outlay FY09-19**



State investment could be broad-based or could target particular areas that will enable federal funding. For example, since roof replacements are often required before schools can install solar, states could establish a fund specifically for roof replacements. Similarly, many school buildings and vehicles are not in compliance with the American Disabilities

Act (ADA), or may be lagging on other building code items. When schools explore investments like heat pump retrofits, they often discover sizable additional investments must be made to meet code requirements. Because these additional improvements can significantly grow the scope and project costs, schools may abandon their plans. States could

consider how to provide funding that can both unlock Elective Pay and also deliver other important improvements to school facilities and [transportation assets](#), like supporting accessibility.

Rhode Island's [School Building Authority](#) provides significant aid to communities to build and renovate school buildings with a particular focus on providing support to low-wealth communities. Investment in school facilities is guided by a statewide facility condition assessment and in FY 2022, the Rhode Island Department of Education established the [Facility Equity Initiative](#) to provide additional support to certain high-need districts.

**STATE INVESTMENTS IN SCHOOL ROOFS CAN UNLOCK SAVINGS FROM SOLAR**

*Investing in school roofs makes good sense. A leaky roof puts the health of indoor spaces and the quality of the building systems and interiors at risk, causing moisture, mold, and poor indoor air quality, which adversely impacts student, educator, and staff health. With Elective Pay, investing in a new roof can yield additional financial benefits. Installing solar on school roofs generates an Elective Pay reimbursement and energy savings, and the solar panels also help protect the new roof.*

*Table 4 shows indicative costs and proceeds from a hypothetical roof replacement and solar energy system installation at a Massachusetts school.*

**Table 4: Sample School Roof Replacement and Solar Savings in Massachusetts**

Size of roof (sq ft)	46,200
Cost of new roof per sq ft	\$79
Cost of new roof	\$3,667,491
Size of solar energy system (kW)	444
Cost of solar energy system (A)	\$1,414,931
Estimated Elective Pay reimbursement	\$424,479
NPV of 25-year net savings	\$2,061,935
Total solar proceeds (B)	\$2,486,414
<b>Excess solar proceeds (B-A)</b>	<b>\$1,071,483</b>

Note:  
Cost estimates from 2022.

*The Elective Pay reimbursement can replenish the capital budget, while the energy savings can support operating cost savings. The solar pays for itself, and generates an additional \$1 million (in net present value) in proceeds over 25 years.*

### 3.6 Create financial and programmatic supports for heat pump retrofits



Retrofitting existing buildings with ground-source heat pumps can present significant technical, logistical, and financial challenges.

State agencies can devise financial and programmatic supports that take aim at the particular challenges that can occur when districts implement heat pump retrofit projects. Well-designed programs to support retrofits will need to meet

several criteria: they should contend with the wide variation in existing conditions at schools, especially the current fuel source, distribution equipment, and site conditions; they should create support for the particular considerations related to siting and pre-development costs for ground-source heat pumps; and they should focus limited resources on schools serving the most vulnerable and historically resource-deprived communities.

*[New York State's Clean Green Schools initiative](#) targets high-need schools and districts with funds to evaluate, plan, and implement comprehensive energy reduction, decarbonization, and indoor air quality improvement projects. This includes the installation of ground-source heat pumps and important enabling work, such as roof enhancements and geothermal testing.*

*The [Massachusetts School Building Authority](#) issued an [RFR](#) for technical assistance to develop a heat pump retrofit program.*

*Minnesota lawmakers [established geothermal planning grants](#) to help defray the upfront costs associated with exploring sites and building viability for moving to this technology.*

*[Maryland](#) and [Virginia](#) have passed laws that establish geothermal heating and cooling systems as part of each state's Renewable Portfolio Standard. These laws allow geothermal technologies to generate renewable energy certificates (RECs), which can be traded or sold to utilities by the owner of the electricity generation source. This additional source of revenue available to owners of ground-source heat pump systems enhances the financial case for moving to clean energy.*

Mechanical Room at Buckley Elementary School, Manchester, CT. Courtesy of CMTA.



### HVAC CHOICES FOR STUDENT HEALTH AND LEARNING: WHAT POLICYMAKERS, SCHOOL DISTRICT LEADERS AND ADVOCATES NEED TO KNOW

*The choice of HVAC systems has meaningful impacts on student learning, but leaders and stakeholders are often intimidated by the technical nature of the information needed to make decisions. This leaves them ill-equipped to understand the implications of their choices. In January 2023, RMI and UndauntedK12 released a [report](#) to provide these audiences with an approachable set of concepts and information to help them make more informed decisions. The report along with [two short briefs](#) and [a webinar](#) can help leaders understand the benefits of transitioning to ground-source heat pumps.*

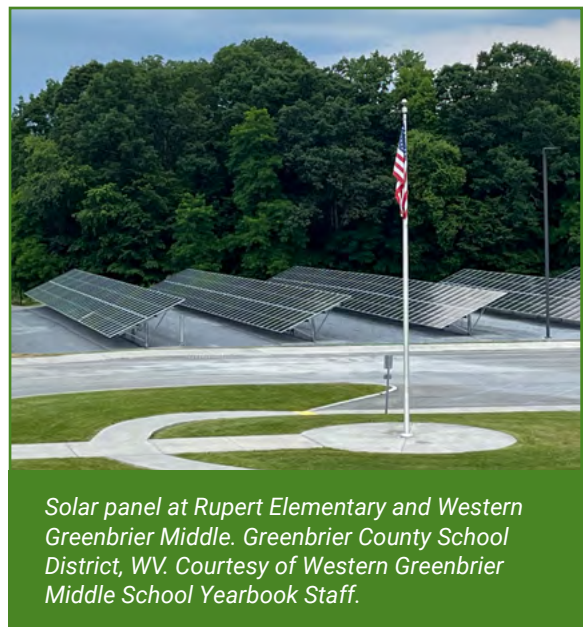
### 3.7 Support public ownership of solar



According to Generation180's [Brighter Future](#) report, as of 2024, at least 1 in 9 students attend a K-12 school powered by solar energy. Estimates suggest that about [80 percent of these projects were financed through third-party ownership structures](#) such as Power Purchase Agreements, in which a private sector entity owns the solar energy system and the district receives a portion of the economic value generated by the system. While districts may continue to deploy solar using a Power Purchase Agreement, Elective Pay offers districts another option – direct ownership of solar energy systems.

At a minimum, states can help school leaders evaluate the benefits and risks associated with different ownership models. States can help districts understand the financial benefits that may accrue to solar ownership especially when

funded with low-cost municipal debt while also being clear-eyed about the additional responsibilities and competencies required to effectively manage clean energy assets.



Solar panel at Rupert Elementary and Western Greenbrier Middle. Greenbrier County School District, WV. Courtesy of Western Greenbrier Middle School Yearbook Staff.

*Lawmakers in Pennsylvania passed [HB 1032 \(Fiedler\)](#) to create a “Solar for Schools” program to help local school districts install solar. In addition to significant grant support, a [toolkit](#) guides districts through evaluating direct ownership versus third-party ownership.*

States can go further by providing access to supplemental grants or low-cost financing to support district-owned solar.

*In New York, the passage of the [Build Public Renewables Act in 2023](#) enabled public funding to build publicly-owned, 100% renewable energy. As a result, [Public Solar NYC](#) will use municipal financing to leverage additional investments meant to finance, permit, install, own, and maintain thousands of small and mid-sized rooftop arrays on publicly-owned buildings, including school buildings, as part of the city’s growing clean energy portfolio.*

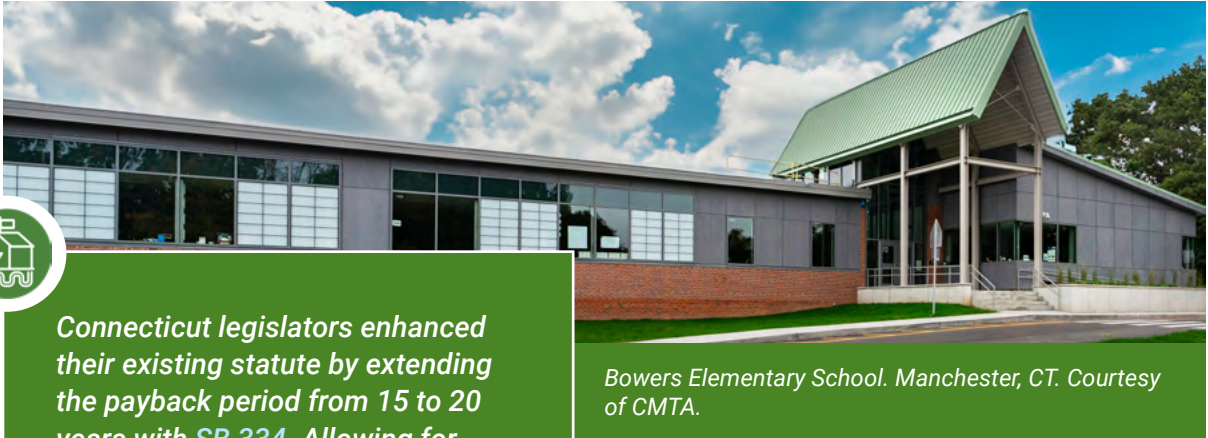
### 3.8 Enable private sector investment in school facilities



Many school districts have neither the available capital budget nor the in-house expertise needed to conceptualize and manage the array of building projects that would allow them to maximize the Elective Pay opportunity. One solution to both problems is for school districts to partner with an energy services company (ESCO). ESCOs help their customers design, finance, and implement energy projects, and then operate the projects through performance-based contracts. Working with a qualified ESCO, a school district can both leverage Elective Pay and operational savings to reduce upfront costs, and pay off what remains of the capital investment. For districts that do not have access to capital, ESCOs may be the only viable pathway to undertaking energy-saving investments in school facilities.

States can facilitate these partnerships in numerous ways, including [passing enabling legislation](#), providing a [list of qualified ESCOs](#), and providing technical assistance to districts (such as template contracts). To enable more districts to incorporate ground-source heat pumps into performance contracting work, states should ensure that the enabling statute provides a generous payback period (ideally 25 years or the lifespan of the asset, whichever is shorter) and allows fuel-switching. Moreover, the required payback calculations should be able to incorporate a buy-down using Elective Pay.

*[Pennsylvania](#) and [Ohio](#) both provide strong models for state enabling legislation for the ESCO model.*



Connecticut legislators enhanced their existing statute by extending the payback period from 15 to 20 years with [SB 334](#). Allowing for longer payback periods are critical for encouraging investments into ground-source heat pumps, which require substantial capital investment but also have long lifespans.

Bowers Elementary School. Manchester, CT. Courtesy of CMTA.

The State of Oregon provides [substantial technical assistance and resources](#) related to performance contracting.

### PERFORMANCE CONTRACTING TO GO FAR WITH ELECTIVE PAY

Loudoun County Public Schools (VA) contracted with CMTA, an engineering company that also offers performance contracting, to help them improve school facilities and reduce emissions. The [scope](#) included HVAC upgrades and solar energy systems that qualify the district for approximately \$9-\$10 million in Elective Pay reimbursement. Expertise and project management capacity from CMTA accessed through the [performance contracting model](#) has allowed the district to undertake \$300 million in facilities upgrades across 49 facilities.

In November 2023, Ida Public Schools (MI) received public support to replace 49-year-old boilers and inefficient air handling equipment that were beyond their useful life with a new ground-source heat pump system to serve both the middle and high schools. They hired [Veregy](#) to do this work, and also perform an array of energy conservation measures. Ida Public Schools will pay for the expansive scope using local funds, along with bill savings over time, and an Elective Pay reimbursement equivalent to 40 percent of the cost of the ground-source heat pump system.

### 3.9 Encourage utility co-investment and collaboration



Utility companies can be key partners to districts installing clean energy equipment on school campuses, offering technical assistance and rebates to help districts plan and execute energy efficiency projects.

Utility leaders can leverage their strategic planning processes to incorporate supports for districts that encourage equitable adoption of clean energy including [electric school buses](#). These supports may include outreach to school district customers about Elective Pay, technical assistance to conceptualize projects, and financial assistance to defray local costs. State regulators can encourage utilities to pursue these actions and hold them accountable for providing support to high-need districts.

*In 2024, Connecticut lawmakers instructed the Public Utilities Regulatory Authority to develop a program to encourage installation of solar energy systems on public schools. (See Section 173 of [HB 5524](#).)*

*Through Con Edison of [New York](#), schools can obtain up to a 50 percent reimbursement of their costs to conduct thermal conductivity tests prior to installing a ground-source heat pump.*

*Mass Save, Massachusetts' state energy efficiency program coordinated by investor-owned utilities, provides [sizable rebates](#) to commercial customers, including schools, that deploy ground-source heat pumps. These systems are eligible for a rebate of \$4,500 per ton. For a typical 100,000 sq ft elementary school building, the Mass Save incentive for ground-source heat pumps might be \$1 million.*

**NOT ALL HEAT PUMP REBATES ARE CREATED EQUAL**

*[Efficiency Maine](#), an independent agency overseen by the state's Public Utilities Commission, offers schools rebates for many kinds of heat pumps, but effectively discourages ground-source heat pumps through the structure of its rebates. A typical 100,000 sq ft new school construction project incorporating a Variable Refrigerant Flow (VRF) system with heat recovery would receive \$700,000 in rebates. Conversely, the same school installing 280 tons of ground-source heat pump capacity would only receive \$28,000 in rebates.*

### 3.10 Replicate Elective Pay as a state program

Some states have replicated the federal government’s use of tax credit reimbursement payments as a mechanism to support clean energy investment by creating their own complementary state tax credits for clean energy. These state tax credits further offset installation costs thereby making clean energy machines even more affordable for communities.

States can continue to track the evolution of this policy tool by adopting a state version of the Elective Pay mechanism. The [State Earned Income Tax Credit](#) provides a model for how states can support a refundable tax credit. Analysis of the uptake for the federal credit will provide some insight for states to anticipate and budget for the expenditure impact.

*[Vermont](#) adds a proportional state credit for investments in solar energy that are eligible for the federal Investment Tax Credit. The federal credit covers about one-quarter of the cost of a qualifying project, and the state credit is about one-quarter of the federal credit. Vermont could make its state tax credit for clean energy available as a cash reimbursement to tax-exempt entities, like schools.*

*[South Carolina](#) offers a corporate tax credit for several clean energy technologies including solar and geothermal equivalent to 25% of costs with a maximum incentive of \$3,500. South Carolina legislators could enhance the value of this tax credit and make it refundable to non-taxpayers like schools.*



Lexington Richland School District Five. Irmo, SC. Courtesy of CMTA.

4

FOSTER SUPPORTIVE CONDITIONS FOR DISTRICTS TO TRANSITION TO CLEAN ENERGY.

4.1 Grow and expand registered apprenticeship programs (RAP)



One of the most significant bonus provisions related to Elective Pay requires that the school district pay prevailing wages and have a certain percentage of the workforce on a project come through a registered apprenticeship program (RAP). For projects of a certain size, the prevailing wage and apprenticeship bonus can take a base tax credit of six percent to 30 percent (see [Appendix A](#)). States play an essential role in ensuring there is a robust pipeline of registered apprentices aligned to local job opportunities and clean energy priorities.

State Apprenticeship Agencies (SAAs) should expand their reach into trades aligned to locally relevant Elective Pay-supported clean energy technologies, including but not limited to, [electricians](#), [sheet metal workers](#), [roofers](#), [drillers](#), and [insulators](#). SAAs can do this by strengthening partnerships with affiliated [trade unions](#) including IUPAT, IBEW, IUOE, SMART and UA.

*The Wisconsin Regional Training Partnership - Building Industry Group Skilled Trades Employment Program ([WRTP|BIG STEP](#)) works with the U.S. Department of Labor to increase awareness of Registered Apprenticeships, identify and improve practices and partnerships, provide better access and resources for underserved and underrepresented populations, and promote Registered Apprenticeship as a mainstream workforce strategy.*

States must also evolve existing apprenticeship training to incorporate the impact of climate, building code, and deep energy retrofit awareness – all in service of advancing clean energy technologies.

*Pennsylvania's Keystone Development Partnership offers a [Registered Apprenticeship \(RA\) Navigator Program](#), which prepares workforce development intermediaries to assist in starting and scaling up Registered Apprenticeship Programs.*

*The New York State Energy Research and Development Authority (NYSERDA) offers apprenticeships in locally relevant [clean energy fields](#), including HVAC installers.*

*Under the [2012 California Clean Energy Jobs Act \(Proposition 39\)](#), California changed the corporate income tax code to allocate five years of funding for improving energy efficiency across California schools. It simultaneously created a grant program for Pre-Apprenticeship Support, Training and Placement, in which approximately two-thirds of the jobs created by the program were in traditional construction trades occupations with “green skill” elements.*

Further, states can provide more support to employers sponsoring their own Registered Apprenticeship programs. By collaborating with employer consortia or industry groups, state agencies can help employers register new programs with the appropriate Registration Agency, the Office of Apprenticeship, or their SAA. Guidance for developing new apprenticeships and examples of states that have developed programs can be found in [The White House Playbook: Workforce Investments that Work](#).

*Maine leveraged \$11 million in [SLRF funds](#) to more than [double](#) the number of apprentices in its long-running Maine Apprenticeship Program. The state competitively selected 14 organizations that will partner with the state’s Department of Labor to expand the Maine Apprenticeship Program in 50 new occupations.*

Governor Shapiro of Pennsylvania issued an executive order creating [The Commonwealth Workforce Transformation Program \(CWTP\)](#), a first-in-the-nation workforce training program. The program will reserve at least three percent of all funding it receives from the Infrastructure Investment and Jobs Act and the IRA to fund workforce development and on-the-job training, which may invest as much as \$400 million over the next five years in workforce training with the goal of creating 10,000 new jobs. This program will complement the \$2.5 million in funding provided by the state’s [Department of Labor & Industry’s Clean Energy Workforce Development Grants](#).

Another strategy for expanding enrollment in registered apprenticeship programs is to create pathways for high school graduates in registered apprenticeships by promoting partnerships between [Career Technical Education \(CTE\) programs](#) and RAPs that share goals. The [MC3 curriculum](#) led by NABTU offers training opportunities to develop the skills needed to qualify for entry into a RAP.



Western Greenbrier Middle. Crawley, WV. Courtesy of Western Greenbrier Middle School Yearbook Staff.

*The Washington Office of Superintendent of Public Instruction offers CTE for [Architecture and Construction Career Cluster/Pathways](#) which prepares a student for apprenticeship and other options, as participants “learn and practice skills that prepare them for diverse post-high school education and training opportunities, from apprenticeships and two-year college programs for four-year college and graduate programs.”*

*The New York State Work-Based Learning Model supports students to gain knowledge and skills in the career area of construction which prepares for associated occupations as electricians, HVAC technicians, and welders. The work-based learning model takes place in school and in workplaces where the business or community organization essentially becomes a micro-classroom with the emphasis on learning rather than productivity.*

## 4.2 Review utility landscape for policy alignment and transparent access to key clean energy information



Cooperation with utility companies is an essential condition for schools to take full advantage of Elective Pay. Utilities are responsible for integrating clean energy assets like solar energy, energy storage, electric vehicles, and electric vehicle charging infrastructure within the grid infrastructure while also managing costs

and delivering on reliability. They also hold key data which can guide effective and timely deployment of clean energy assets based on [grid capacity](#).

When data and processes for deploying clean energy assets onto the grid are transparent, reliable, timely, and not cost-



Courtesy of alacatr via iStock.

prohibitive, owners are encouraged to pursue these technologies. However, in many states or in certain territories, utility policies and practices inhibit deployment of clean energy. Given the Elective Pay opportunity for schools, these policies and practices now represent a notable barrier to federal investment in schools.

State Public Utility Commissions (PUCs) can review the policies, practices, and outcomes that characterize how utilities serve school district customers. Districts have particular energy use profiles and needs. For example, districts are best served when solar installed on one building can defray energy costs at another campus site through “virtual meter aggregation,” which allows electricity meters on multiple buildings to be billed as one. Also, given the role that school buildings often play as emergency shelters, they warrant particular attention as sites for [microgrids](#) featuring energy storage.

Electric school buses can also serve as mobile power units, [providing emergency backup power during disaster response](#). Tracking simple metrics like the time to interconnection for school district customers will provide state leaders with a perspective on opportunities for improvement.

*New Mexico earned an ‘A’ score from the Interstate Renewable Energy Council (IREC) and Vote Solar in their report [Freeing the Grid](#), and serves as a model for other states to follow.*

*Pennsylvania’s [Alternative Energy Portfolio Standards \(AEPS\) Act of 2004](#) allows for net metering aggregation across a 2-mile radius, whether or not properties are contiguous: “Virtual meter aggregation on properties owned or leased and operated by a customer-generator and located within two miles of the boundaries of the customer-generator’s property and within a single electric distribution company’s service territory shall be eligible for net metering.” This allows school campuses with more than one electricity meter to consume the solar energy they generate across their entire property, no matter the number of meters.*



Stock Photo.



### CAUTIONARY TALES: UTILITIES AND SOLAR ENERGY

*Some utilities have set policies and practices that make it uneconomical for schools to install solar energy systems. Given the Elective Pay reimbursements available for solar energy projects, these policies also depress the volume of federal funding flowing to these states.*

*In Virginia, the region's primary utility, Dominion Energy, has taken actions that discourage schools from pursuing clean energy projects. In December 2022, without the approval of state regulators, the utility began imposing [new costs](#) on commercial and institutional customers seeking to install solar. These costs made solar uneconomical. As of August 2023, the Virginia State Corporation Commission (their PUC) agreed and [granted immediate injunctive relief](#).*

*In a [November 2023](#) hearing, the California Public Utilities Commission undercut the financial incentive for on-site solar and storage by disallowing properties with multiple energy meters – a common configuration at older schools – from using all of their generated electricity across their campus. (Two of every five California schools are at least 50 years old.) A school partially powered by solar can use that energy as it is generated, or, if they have battery storage, can store and discharge the energy later, thereby reducing its overall reliance on the grid and its aggregate energy costs. But the [effect of decisions by the state commission](#) is to compel such schools to sell the surplus energy they generate and later buy it back, at a premium, from the local utility. [SB 1374 \(Becker\)](#), which would have addressed the issue for schools and multi-family housing, passed the legislature in 2024 but was vetoed by California Governor Newsom.*

*[Kentucky](#) is home to the first school in the country to achieve net-zero energy: Richardsville Elementary, in rural Warren County. Since Richardsville Elementary was constructed in 2010, [changes](#) in the state's utility regulations have capped the amount of energy that customers can self-generate with solar, and reduced the amount utilities pay such customers for the energy they contribute back to the grid.*

*There are also innumerable examples of utilities that have discouraged solar deployment on schools by delaying [interconnection](#). Schools that experience delays in interconnection incur additional and sometimes substantial costs. This further discourages additional investment as districts hear about the difficult experience of their peers.*

### 4.3 Incentivize high-performance buildings



Building codes, and specifically the energy code, can ensure that new school construction and major modernization projects incorporate clean energy. Model green building standards are available from the U.S. Green Building Council's Leadership in Energy & Environmental Design ([LEED](#)) program, or the Collaborative for High Performance Schools ([CHPS](#)). The [Advanced Energy Design Guide for K-12 School Buildings: Achieving Zero Energy](#) can guide the development of state standards and provides important benchmarks for building performance by climate zone.

State legislators can take this opportunity to advance construction codes, energy codes, and building performance standards to provide strong direction to local decision-makers to embrace the clean energy technologies for which Elective Pay is available. Financial incentives can accelerate the transition to high-performance buildings.

*[Minnesota's](#) guidelines for state-supported building projects, including school construction and renovation, incorporate [energy efficiency standards](#) that incentivize project designers to combine on-site energy generation, clean energy technologies, and attention to the integrity of the building envelope.*

*On January 1, 2023, [California](#) became the first state to mandate solar systems as part of all new construction, whether residential, commercial, or institutional. New school buildings are grouped with civic offices, medical facilities, hotels, and other large structures in a class of projects that are required to include battery storage as well as solar generation. For existing buildings in this class, preparations for solar, if not actual installation, must be included in any major renovation project. For example, school roofs must be made capable of accommodating solar panels.*



*Mechanical room at Rupert Elementary and Western Greenbrier Middle. Crawley, WV. Courtesy of Western Greenbrier Middle School Yearbook Staff.*

Building performance standards are gaining popularity among [leading cities and states](#) as a powerful tool to reduce building emissions and improve air quality. These standards work alongside building and energy codes by requiring measurement and reporting, and by setting limits on future emissions from existing buildings. Requiring buildings, including schools, to limit their emissions can encourage their owners to adopt heat pumps, eliminating what is typically the main source of on-site emissions: building heating.

*The Washington State Department of Commerce introduced [Clean Buildings Performance Standards](#) in 2019 with the goal of lowering costs and pollution from fossil fuel consumption. By June 1, 2028, all buildings over 50,000 sq ft including schools must comply with standards for energy use intensity (EUI) or face fines.*

**AMBITIOUS ENERGY CODES CAN DRIVE DEMAND FOR ELECTIVE PAY**

*Simona Fischer, the Director of Sustainable Practice at MSR Design and co-chair of the Committee on the Environment for the American Institute of Architects' Minnesota chapter, anticipated that advancing the state's energy code would [prompt building owners to make the type of investments that will unlock Elective Pay](#). And indeed, citing the state code, St. Paul is installing Elective Pay-eligible ground-source heat pump systems at schools ranging from small neighborhood K-5s to comprehensive high schools.*



Tohatchi School solar canopy. Tohatchi, NM. Courtesy of Yearout Energy.

5

**BUILD THE CAPACITY OF DISTRICT AND STATE LEADERS TO ACHIEVE A TRANSITION TO CLEAN ENERGY.**

**5.1 Build knowledge and staff capacity among state agencies**



In order for state leaders to support districts, they must first invest their own staff time to gain fluency with Elective Pay, the clean energy technologies supported by the policy, and the particular applicability and challenges associated with these technologies for schools in their state.

Governor’s Offices should prepare and implement professional development plans to ensure staff fluency with Elective Pay. Any state agency with a nexus to school infrastructure should identify staff that need a working knowledge of clean energy technologies, the benefits they provide to students and school communities, and Elective Pay as a funding mechanism.

*The [Massachusetts School Building Authority](#) acted early to ensure their staff had knowledge about clean energy tax credits, and how they would affect the context within which the agency invests in school construction. They leveraged expertise from design firm and net-zero schools leader [CMTA](#) to conduct internal training for staff on Elective Pay.*

*The [Maryland Interagency Commission on School Construction \(IAC\)](#) sponsored an overview of Elective Pay opportunities for its staff, as well as staff from the state’s association of counties, association of boards of education, and superintendents’ association. The intent was to prepare staff to support LEA and local county staff.*

Courtesy of Tim Pruss via iStock.



## 5.2 Coordinate technical assistance and support capacity-building in districts



School district administrators require new knowledge and a variety of technical assistance to accomplish clean energy projects. These areas of need include general knowledge about clean energy technologies and how they interact with utilities, along with best practices in project management, financial planning, and operations and maintenance as they relate to clean energy. District leaders need support on communications to help educate and engage with stakeholders on the opportunities to transition to clean energy technologies. With the advent of Elective Pay, district leaders need legal and accounting expertise to navigate the IRS processes.

States can invest in capacity-building for districts by offering professional development for existing staff and salary support for energy manager or sustainability positions where they do not exist. State leaders can also provide guidance, model RFPs, and language to support districts with engaging private sector partners who have expertise to leverage Elective Pay. As states explore ways to close these gaps, they should pay particular attention to small districts and those with low capacity, as they will likely require the most direct forms of assistance and intensive investments in capacity-building to realize their opportunities through Elective Pay.

*The U.S. Department of Energy offers district staff free, online training through [Energy Champions Leading the Advancement of Sustainable Schools \(Energy CLASS\)](#). Districts can join the [Efficient & Healthy Schools Program](#) to receive tailored technical assistance.*

*The [Energy Project Reimbursement Assistance \(EPRA\)](#) in Rhode Island is a nascent collaboration between Climate Jobs Rhode Island, RI AFL-CIO and the [Partnership for Rhode Island](#), a CEO roundtable, to support Elective Pay-eligible entities in Rhode Island to access this federal funding.*

*In Washington State, the Department of Commerce helps organizations access key federal tax incentives from the Inflation Reduction Act for clean energy projects. [Washington's Clean Energy Tax Credit Assistance Program \(CETCAP\)](#) is free for organizations and entities across Washington, and entities serving underrepresented, overburdened, and/or vulnerable communities will be prioritized.*

Thanks to the [Clean Energy Jobs Act](#) (SB 1718 Castro & HB 804 Williams), public schools in Illinois can tap their utility, [ComEd](#), for a free assessment of their potential to decarbonize and reduce energy costs. Reports include custom specifications, timelines, and cost estimates to mount solar, install heat pumps, and replace fossil gas-burning water heaters and cooking equipment with electric alternatives, as well as funding incentives available through the utility and other sources – including Elective Pay. Participating schools can then submit ComEd’s assessment with their application for a state construction grant.

For schools that are developing a clean energy project but need outside assistance to plan and move it forward, [Efficiency Maine](#) covers up to 50 percent of the cost to review construction bid documents and conduct analyses of complex electrification projects, including interconnections with the local grid.

The Massachusetts Clean Energy Center plans to launch the [Green School Works](#) program in early 2025 to organize and subsidize a range of technical assistance for school districts across clean energy technologies in close coordination with utility program administrators.

Professional development among K-12 business and financial officers is especially important. Clean energy investments will become mainstream in schools when these technologies make financial sense. Elective Pay can strengthen this case, but school business officers today have limited experience evaluating the financial case for clean energy. State associations of school business officers can create training that increases member fluency with financial analysis of clean energy technologies and Elective Pay specifically.

States can provide salary support for districts to hire or share energy managers and sustainability leaders. These hires pay for themselves through the energy-saving projects they identify and execute. In a [study of school sustainability staff](#), the U.S. Green Building Council found that on average, sustainability staff generate \$1 million in savings or about 10 times their annual salary. States can help districts by providing the seed capital to make these hires.

Some of the lowest hanging fruit may be for states to open new lines of communication and collaboration, to allow technical assistance to flow, such as between federal agencies, utility partners, state energy offices, and school administrators. Convenings that bring players together from different agencies and regular mapping of the technical assistance landscape can lower the barriers for busy district leaders to locate new resources and build new relationships. Legislators could consider establishing state clean energy technical assistance hubs to take on these activities.

### 5.3 Create dedicated leadership roles

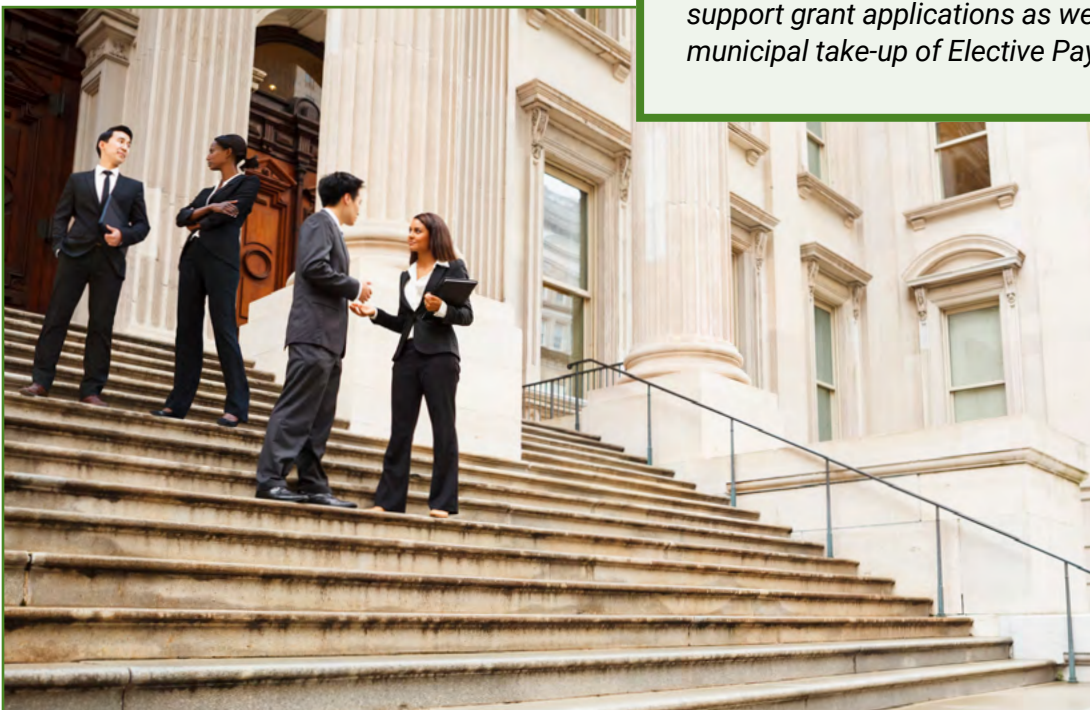


Governors can execute on the wide-ranging opportunities presented in the Inflation Reduction Act by creating new executive-branch roles with a charge to optimize federal investment in the state. Leaders can work with other Cabinet members and across agencies to serve as a clear and authoritative voice on Elective Pay and devise strategies to mount a whole-of-state-government response. They can showcase clean energy deployment at schools, highlight the benefits these improvements deliver to students and communities, and promote opportunities to earn federal incentives to defray installation costs. Chief State School Officers can also create roles within their agencies to align funding and devise strategies around federal funding opportunities for schools.

*In Pennsylvania, Governor Josh Shapiro created the [Office of Critical Investments](#) to help the state make the most of federal funding opportunities in the Infrastructure Investment & Jobs Act and the Inflation Reduction Act.*

*Massachusetts Governor Maura Healey created the [Federal Funds and Infrastructure Office](#) to lead a whole-of-government effort to make sure the state makes the most of federal funding opportunities. The Office facilitates [monthly meetings](#) to provide updates on opportunities and support grant applications as well as municipal take-up of Elective Pay.*

Courtesy of wdstock via iStock.



## 5.4 Assemble school facility data



No federal agency or national research center currently maintains a complete inventory of public K-12 school facilities; nor do all states regularly collect and report basic data on the condition of school facilities including the age and type of building systems as well as student demographic data including race/ethnicity, socioeconomic status, and other metrics of vulnerability. Without such critical information, state leaders are at a disadvantage when it comes to the opportunity to harness Elective Pay to advance more equitable facilities.

States should develop a data-driven strategy to advance equitable, cost-effective deployment of clean energy at schools using Elective Pay. States that do not currently perform any data collection at school facilities should consider what available data such as utility bills, building permits, or school closures due to extreme heat may provide helpful insight. For example, cross-referencing lists of schools that lack air conditioning and serve student populations heavily burdened by asthma could help identify strong candidates for ground-source heat pump retrofits.

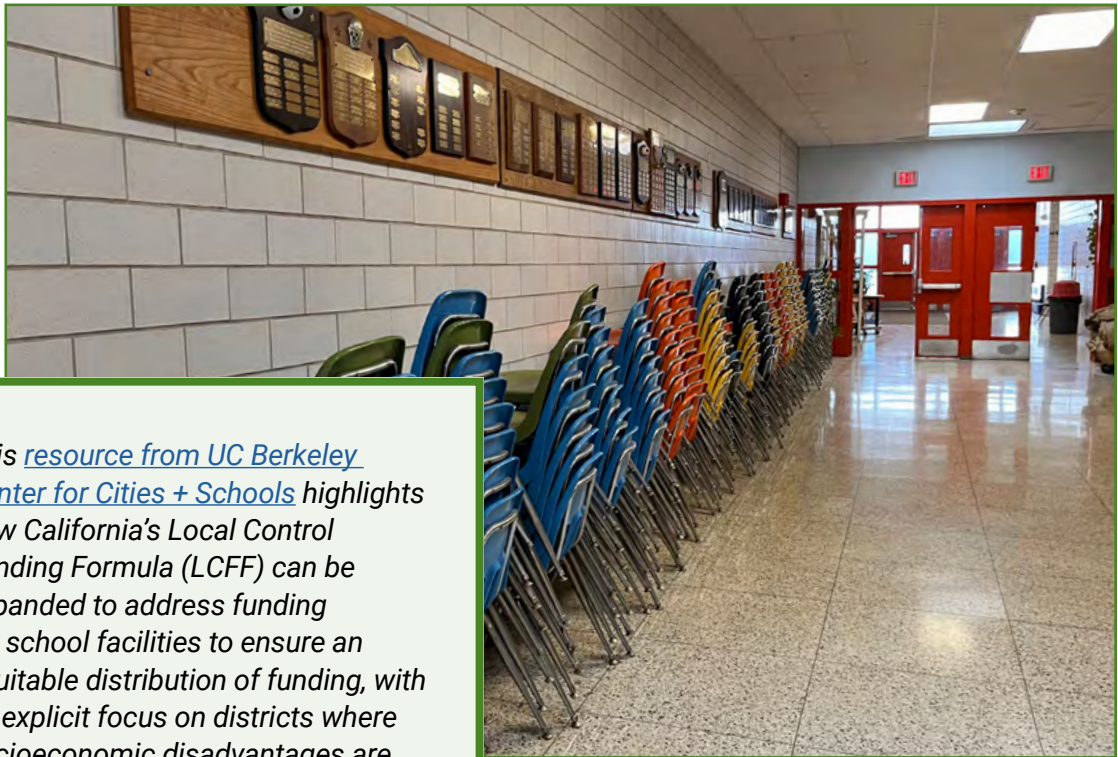
Those states that do perform regular surveys should consider whether new data elements would be useful to better identify strong candidates for the clean energy investments supported by Elective Pay. State leaders can then maintain a publicly-accessible inventory of school district buildings, grounds, and other district-owned fleets and facilities so that private and non-profit sector partners can also assist in outreach to districts.

*Pennsylvania currently lacks statewide data on school facility conditions. [House Bill 2435](#) (Fiedler) would establish a School Facilities Office within the Department of Education and a Public School Facility Advisory Committee to develop and implement a statewide facility condition assessment of each public school facility.*



Stock Photo: School hallway.

*In Fall 2024, the [Massachusetts School Building Authority](#) launched the latest of its school surveys which will involve site visits and data collection at approximately 1,580 school buildings. This dataset will include information on age of boilers and fuel type, age of roof, as well as coverage of cooling. This data could be used to identify strong candidates for investments in clean energy.*



*This [resource from UC Berkeley Center for Cities + Schools](#) highlights how California's Local Control Funding Formula (LCFF) can be expanded to address funding for school facilities to ensure an equitable distribution of funding, with an explicit focus on districts where socioeconomic disadvantages are most prevalent.*

*Hopkins Academy. Hadley, MA. Courtesy of Sara Ross.*

### **SIZING UP THE INEQUITIES IN OUR NATION'S PUBLIC SCHOOL FACILITIES**

*The [State of Our Schools report](#) is a key resource for state leaders looking to understand the patterns of underinvestment in our school facilities. The report collects and benchmarks spending data for each state including capital investments as well as maintenance and operations. The 2021 report highlighted the \$85 billion gap in school infrastructure spending, a gap that inequitably grows for districts with a high number of economically-disadvantaged students.*

*For example, low-poverty districts spend an average of \$5.2 million per school for school construction compared to an average of \$3.8 million spent per school in high-poverty districts. The report found that Hispanic/Latino, African American, and Native American students are represented disproportionately in high-poverty districts, where the schools (on average) have had the lowest levels of investment.*

**With the creation of Elective Pay, districts have unprecedented access to non-competitive federal funding and an extended time horizon over which to plan and implement eligible projects.**

The law provides for funding at current levels for years into the future. For example, incentives for ground-source heat pump projects extend until January 1, 2035. With robust, intentional deployment, Elective Pay could deliver the largest ever federal investment in school facilities – provided districts take advantage of it. These investments can translate into significant benefits to students, staff and their communities, including lower operating costs, better outcomes for student learning and staff retention, improved indoor and outdoor air quality, enhanced resilience, and reduced contributions to planet-warming emissions.

Meanwhile, the costs of inaction are mounting and they will be borne disproportionately by the most vulnerable students. As temperatures continue to rise, too many of our campuses and classrooms can't keep up. Schools are increasingly adjusting their schedules or [closing entirely](#). [Student performance is negatively impacted](#) and the combination of extreme heat and ill-equipped buildings is having an [inequitable impact](#) on Black and Hispanic students. Our historic underinvestment in

school facilities, especially in communities most vulnerable to the impacts of climate, continues to widen these inequities. Low-poverty districts spend about [\\$1 billion more](#) on capital construction than high-poverty districts.

District leaders make consequential decisions about school facilities each school day. Clean energy tax credits and Elective Pay have bearing on these decisions which guide approximately [\\$110 billion](#) in school infrastructure every year.

**No new school construction project or major renovation should be undertaken without consideration of how to leverage Elective Pay so that the project can include vital clean energy technologies. No district's facilities master plan or capital plan should be silent on this opportunity.**

Every school with an aging HVAC system or a roof in need of replacement should evaluate whether ground-source heat pumps and rooftop solar could be viable options. Failing to meet this moment will translate into leaving billions of dollars on the table, while continuing dependence on inefficient equipment that strains operating budgets, contributes to local air pollution, and misses opportunities to support student health and learning.

State leaders can and must do their part. Leaders in a variety of roles can take

straightforward, low-cost actions that raise awareness as outlined in this playbook. They can also make transformative investments that will help districts make the most of this opportunity. Districts serving vulnerable communities have the most to gain and likely require the most support in the form of capacity building and complementary investments. All together, the catalog of actions detailed in this playbook demonstrate how state leaders are uniquely positioned to impact districts across the state and are critical for equitable distribution of federal funds.



American Canyon High School. American Canyon, CA. Courtesy of Tim Maloney / Technical Imagery Studios / Quattrocchi Kwok Architects.

Los Altos High School. Los Altos, CA. Courtesy of Tim Maloney / Technical Imagery Studios / Quattrocchi Kwok Architects

## OVERVIEW OF ELECTIVE PAY FOR SCHOOL DISTRICTS

**T**he Inflation Reduction Act (IRA) is the largest investment in clean energy and climate action in United States history, and it is poised to be the largest ever federal investment in school infrastructure. Billions of dollars are now available to districts for installing eligible clean energy technologies.

### WHAT IS ELECTIVE PAY?

School districts are now eligible to benefit from clean energy tax credits which can reduce the cost of clean energy equipment. When a tax-exempt entity earns clean energy tax credits by installing eligible equipment, the IRS treats the credit amount as an overpayment of taxes and issues a payment to reimburse the tax-exempt entity.

This payment mechanism is called “Direct Pay” or “[Elective Pay](#)”. A district must own the equipment for which it claims clean energy tax credits. For example, if a district entered into a Power Purchase Agreement for solar energy, the district is not eligible to claim clean energy tax credits for the solar energy system.



*Arlington Public Schools / Cardinal Elementary School / VMDO Architects / Lincoln Barbour Photography*

## What clean energy technologies are eligible for Elective Pay?

Elective Pay can be used to generate reimbursements for investments in energy generation and carbon capture, manufacturing, vehicles, and fuels. See the IRS' [Clean Energy Tax Incentives: Elective Pay Eligible Tax Credits](#) for the full list of eligible credits. For school districts, the most common credits pursued are likely to be:

- [Section 48](#): Investment Tax Credit (ITC) for ground-source heat pumps and, before 2025, for solar energy, energy storage, and thermal storage.
- [Section 48E](#): Clean Electricity Investment Tax Credit for technologies

that produce electricity and have a greenhouse gas (“GHG”) emissions rate of zero or less. This “technology-neutral” credit begins in 2025 and will replace Section 48 for solar, energy storage, and thermal storage.

- [Section 45W](#): Commercial Clean Vehicle credit for electric vehicles including electric school buses, white fleet, and certain landscaping equipment.
- [Section 30C](#): Alternative Fuel Vehicle Refueling Property credit for electric vehicle charging equipment.

## How is the Investment Tax Credit (Sec 48/Sec 48E) calculated?

School districts may be eligible for a credit of 6% - 50% of the cost of installing ground-source heat pumps, thermal storage and energy storage systems, and 6% - 70% of the cost of installing solar energy. The amount of the tax credit is determined by considering the following:

- **Cost basis**, which is the cost of installing eligible equipment. Eligible project costs generally include equipment, labor, design costs, general contracting fees, permitting and inspections.
- **Base and bonus credits** which depend on the project size and location, and meeting labor standards and domestic content requirements.

- **Adjustments** which depend on the other funds that are used to finance the project including:
  - *Projects funded with tax-exempt debt are subject to a reduction in the credit amount up to a maximum of 15%.*
  - *Non-taxable income (for example, grants) received for the project can reduce the tax credit. Grants and tax credits together cannot exceed the total cost of a project. If tax credits and other sources of income exceed the total project costs, the tax credit amount will then be reduced. For example, consider a solar project that costs \$100,000 and is supported by a grant of \$90,000. The maximum allowable credit would be \$10,000.*

## What bonus credits are available for the Investment Tax Credit?

### Base Credits

Projects with a maximum output of less than 1 megawatt (MW) are automatically eligible for a 30% credit. Projects over 1 MW need to comply with [prevailing wage and apprenticeship requirements](#), or they will see a reduction in the base credit from 30% to 6%.

### Bonus Credits

Bonus credits, which are stackable, are available for meeting specific policy requirements, specifically:

- **Domestic Content:** A 2-10% bonus\* for using 100% domestic steel or iron in structural applications, and a certain percentage of U.S. manufactured products.
- **Energy Communities:** A 2-10% bonus\* for projects sited at brownfields, in communities with coal facility closures, or in those communities with a certain level of employment in fossil fuel industries combined with a certain level of unemployment.
- **Low-Income Communities:** A 10-20% bonus for solar and wind projects that meet one of 4 qualifying criteria. This credit is only available for qualified solar and wind energy facilities with a maximum net output of less than five megawatts (AC) and requires an application.

*\* Projects over one megawatt (1MW) must comply with [Prevailing Wage and Apprenticeship \(PWA\)](#) requirements in order to claim the full 10% bonus credit. If PWA requirements are not met, each bonus credit will decrease to 2%. Apprentices must be in an apprenticeship program registered under the National Apprenticeship Act. Registered apprenticeship programs are industry-vetted and approved by either the U.S. Department of Labor or a State Apprenticeship Agency.*

## How is the Commercial Clean Vehicle Credit (Sec 45W) calculated?

School districts may earn clean commercial vehicle tax credits by purchasing qualifying electric vehicles from a list of [eligible manufacturers](#). The tax credits are based on the lesser of an incremental cost or \$7,500 for vehicles under 14,000 lbs and \$40,000 for vehicles at or over 14,000 lbs. Tax credits can be combined with federal

grants and rebates for electric vehicles and school buses, but together cannot exceed the total costs of a vehicle. For more information, see the following resources:

- IRS: [Commercial Clean Vehicle Credit](#).
- World Resources Institute: [Section 45W Explainer](#).

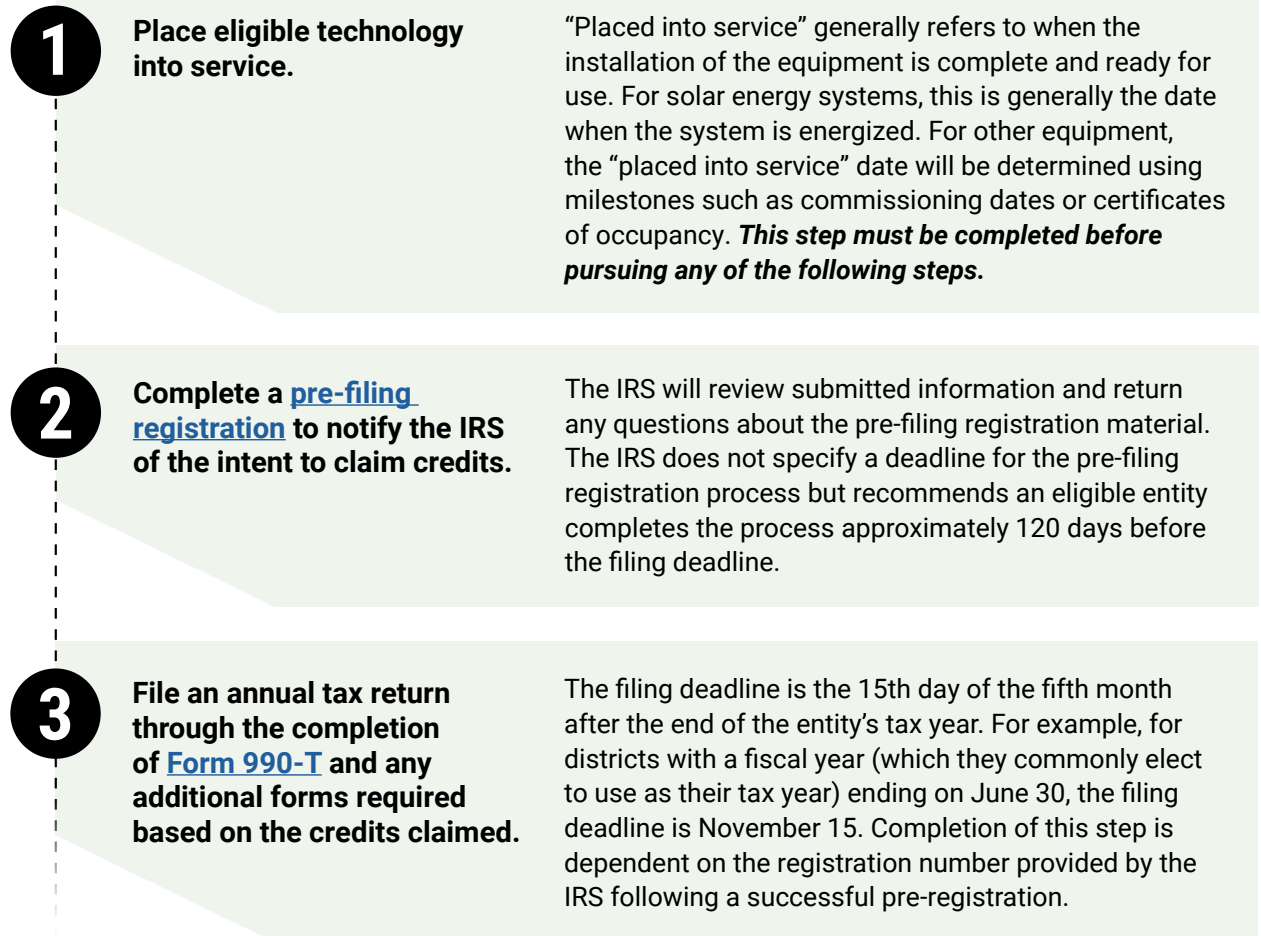
## How is the Alternative Fuel Vehicle Refueling Property Credit (Sec 30C) calculated?

School districts may earn this credit by installing electric vehicle charging equipment at [eligible locations](#). The charging equipment may be used by any vehicles whether district owned or not including electric school buses, white fleet, and passenger vehicles. The credit is calculated as 6% of costs for projects that do not meet PWA and 30% of costs for projects that do meet PWA up to a maximum of \$100,000 per charging port.

Tax credits can be combined with other sources of funding including grants and rebates, but together these sources of funding cannot exceed the total costs of the project or the credit will be reduced. For more information, see the following resources:

- *IRS: [Alternative Fuel Vehicle Refueling Property Credit](#).*
- *World Resources Institute: [Section 30C Explainer](#).*

## What is the process for districts to receive funds?



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**Receive payment.**

The IRS will process the filing, and, if the filing is approved, remit payment. The IRS will not issue payment prior to the filing deadline. For e-filers, funds are expected approximately 45 days after the filing deadline and no sooner than the filing deadline. Paper filers will experience longer timelines.

Districts cannot begin the pre-qualification process until the eligible clean energy equipment has been placed into service. The IRS does not provide a pre-approval process for clean energy tax credits.

For more information, see the following resources:

- IRS: [Register for elective payment or transfer of credits.](#)
- IRS: [Pre-Filing Registration Tool: User Guide and Instructions.](#)

**Additional Resources to Explore**

The Inflation Reduction Act & Elective Pay

- IRS: [Inflation Reduction Act of 2022.](#)
- U.S. Department of Treasury: [Elective Pay Final Regulations.](#)
- IRS: [Elective pay and transferability frequently asked questions.](#)

- North America’s Building Trades Union: [Interactive apprenticeship & training capacity map.](#)

Domestic Content

- IRS: [Domestic content bonus credit.](#)

Prevailing Wage and Apprenticeship (PWA)

- Department of Labor: [Prevailing Wage and the Inflation Reduction Act.](#)
- IRS: [Prevailing Wage and Apprenticeship landing page.](#)
- IRS: [Frequently Asked Questions about the prevailing wage and apprenticeship under the Inflation Reduction Act.](#)
- Department of Labor: [Map of approved apprenticeship programs.](#)

Maps for location-based incentives

- Department of Energy: [Energy Community Tax Credit Bonus.](#)
- Department of Energy: [Low-income Community Bonus](#) for solar and wind projects only.
- Department of Energy: [30C Tax Credit Eligibility Locator.](#)

## THE BENEFITS OF CLEAN ENERGY TECHNOLOGIES

**Clean energy technologies directly benefit students and their communities on multiple levels:**

### Efficiency & Savings

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Districts that adopt clean energy technologies can significantly reduce their operating expenses. Early adopters have already demonstrated how clean energy technologies reduce the [cost of operations and maintenance](#) compared to buildings that rely on legacy technologies that burn

fossil fuels. Now, Elective Pay can make clean energy competitive on a first-cost basis as well. With lower ongoing expenses and fewer costly disruptions, school districts can free up more of their budgets for investments in student health and learning.

### Student Health & Learning

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As extreme weather events become increasingly commonplace, and as we try to prepare our children to adapt, thrive, and ultimately lead our communities in a rapidly changing world, transitioning to climate-resilient schools with support from Elective Pay will provide three key benefits for students:

- 1. Safeguarding their physical health** by reducing exposures to harmful conditions such as extreme heat, pollutants (e.g. wildfire smoke), and more frequent and more intense weather events. For example, exposure

to [diesel exhaust fumes](#) increases students' risk for cancer and asthma. Moreover, diesel exhaust pollution is connected to cognitive development which can undermine students' academic success and learning. With communities of color already facing higher levels of air pollution from gasoline vehicles, schools buses operating and idling become an additional source of local air pollution.

- 2. Reducing the disruption and learning loss** that is associated with these climate-driven extremes. For example,

exposure to airborne pollutants, which is [intensified by wildfire smoke](#), can trigger respiratory illness; nationally, [asthma](#) is a leading cause of disrupted learning and chronic school absence that [affects Black, Hispanic, and Native American students disproportionately](#). Students of color and students in low-wealth communities are also at greater risk for [heat-related impairments](#), as they are more likely to live in a heat island – where shade trees and other heat-mitigating features have been replaced with pavement that absorbs and radiates heat – and less likely to have [effective air conditioning](#) in their schools.

3. **Caring for and supporting students whose mental health is impacted by [climate anxiety](#) and by the [trauma](#) of extreme weather events.** The mental health of young people is significantly impacted by climate change. [Three-quarters of young people](#) surveyed in the U.S. are moderately, very or extremely worried about climate change. Moreover, students with other [vulnerabilities](#) such as poverty or a physical disability face intensified challenges in navigating and recovering from extreme weather events.

## Resilient Schools & Communities

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While school buildings have always served their communities in a multitude of roles from polling places to community centers, schools are increasingly seen as important assets to enhance the resilience of communities to extreme weather events. Climate-resilient school facilities can provide shelter and support especially for the most vulnerable. Schools

with access to on-site energy generation through solar paired with energy storage can maintain operations when the grid is disrupted, ensuring that community members have access to food, electricity, and a conditioned, safe space. In a growing number of communities, schools serve as [cooling centers](#).

## Sustainability & Social Responsibility

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The operation of America’s K-12 school buildings produces approximately 42 million metric tons of [greenhouse gas emissions](#) annually, which is roughly equivalent to the emissions from all the cars on the road in the states of Georgia, Illinois, and Pennsylvania, combined. With over 480,000 largely diesel school buses, schools are responsible for additional transportation-

related climate pollution. Meanwhile, schools represent the second largest form of public infrastructure with buildings, transportation assets and land that can be harnessed to implement a whole range of climate mitigation and adaptation strategies from [green schoolyards](#) to hosting [microgrids](#). [Research](#) shows that seeing solar installations on schools,

houses of faith, and other non-commercial buildings leads to an increased rate of nearby residential solar adoptions. In this way, schools can boost public confidence and help lead the transition to a resilient, sustainable future for their communities. Across the country, [youth-led](#) and [youth-](#)

[serving organizations](#) are advocating for governments, businesses, and civic institutions to dramatically decrease emissions and release future generations from dependence on fossil fuels and mitigate the worsening impacts of climate change.



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