

Thank you to the Education Committee for allowing Climate Jobs NY and the Carbon Free and Healthy Schools campaign to submit our testimony on the review of how NYC school districts should be spending their ARP funds.

The Carbon Free and Healthy Schools campaign is an initiative led by labor unions to urge federal and local lawmakers to modernize and decarbonize our schools, by retrofitting them for energy efficiency, installing solar power, electrifying school buses, and making other improvements that ensure our schools are safe, healthy, cost-effective, and climate-friendly. By investing in school buildings, we can accomplish a lot of things at once: We can have a substantial impact on emissions, make schools healthier and safer for students and the school community, create good union jobs, and save schools millions of dollars in energy costs.

As the largest school district in the United States, only 0.2% of all energy consumed by New York City schools was provided by solar energy. On average, school infrastructure in NYC is about 70 years old, meaning the average school was built somewhere around 1952. Having school infrastructure that is this old poses serious problems to both the well-being and safety of students, teachers and faculty, and serious cost issues.

Health and safety of NYC students must be a top priority. In a study conducted in 2013, it showed that 1 in 10 students have asthma, with the highest rates being reported among non-Hispanic Black and Hispanic middle school and high school students. A NYS School Building Condition Survey, which looked at indoor air quality (IAQ) in schools, showed that schools with good IAQ scores, ventilation, lighting and dryness are correlated with good attendance, better test scores and lower rates of asthma admissions.

In addition, about a quarter of NYC classrooms lack air conditioning, an increasingly serious threat as the climate crisis exacerbates extreme heat days. The current situation will also

worsen the challenges facing the growing number of students attending summer school to make up for lost learning during COVID-19. At the same time, HVAC systems are contributing to extremely hot temperatures in school kitchens and creating unworkable and hazardous conditions for staff.

In order to improve school air quality and make our schools Carbon-Free and Healthy, district administrators should consider the facility repairs and upgrades below:

- Building assessments: Independent assessment of school facilities to identify physical and mechanical deficiencies, with the goal of creating a maintenance and repair plan.
- Energy audits: Comprehensive energy audit of school buildings to assess current energy usage and identify areas for improvement.
- Solar feasibility studies: Assessment of school facilities to determine if and how a solar power system could be installed.
- HVAC repair or replacement: Installing, repairing, or replacing heating, ventilation, and air conditioning (HVAC) systems in school buildings to improve indoor air quality, reduce heating and cooling costs, and make school buildings more resistant to extreme heat.
- Roof repair or replacement: Repair school roofing to stop leaks, improve insulation, reduce heat loss, and prepare for solar installation.
- Window and door replacement: Improve building ventilation and energy efficiency by upgrading interior and exterior windows and doors.
- Building envelope upgrades: Improve energy efficiency and reduce exposure to the elements by upgrading insulation, seals, vents, and weatherstripping.
- Lead and asbestos abatement: Testing, monitoring, and remediation of environmental health hazards commonly found in school buildings.
- Fire safety upgrades: Upgrade fire and life safety equipment, including fire alarms, sprinkler systems, and fire rated doors.
- Plumbing repairs: Repair aging plumbing systems to prevent water damage and mildew caused by leaks, as well as upgrading to low flow fixtures.

- Electrical repairs: Repair aging electrical systems and control panels to meet electrical demand and improve building safety.
- Kitchen upgrades: Upgrade inefficient appliances including refrigerators, freezers, and dishwashers.
- Paint and wall repair: Drywall, plaster, and paint repair including cracks, water damage, and other damage.
- Solar power systems: Install rooftop or ground mount solar array to generate power, reduce overall energy costs, and significantly reduce the school's carbon footprint.
- Energy efficiency retrofits: Increase energy efficiency and reduce energy demand by optimizing and upgrading building systems, mechanical controls, and appliances.
- Reflective roof coatings: "Cool roofing" to reduce heat absorption, reduce building cooling costs, and prolong the lifespan of an existing roof.
- Lighting upgrades: Upgrading interior and exterior lighting to energy-efficient LED fixtures.
- Electric school buses: Converting the district's fleet of school buses to zero-emission electric vehicles.
- Electric vehicle charging: Installing charging stations at key locations on campus to encourage the use of electric vehicles.
- Establishing cooling centers: While upgrading HVAC systems, prioritize installing air conditioning so schools can serve as community cooling centers during extreme heat.
- Other climate adaptations: Other investments to reduce a school's environmental impact and improve resilience to extreme weather events, including planting trees and other native species, installing stormwater management systems, hosting urban gardens and greenhouses, and implementing water conservation and waste management strategies. More info on these can be found [here](#).
- Pre-apprenticeship programs for school construction workers: Worker recruitment and skills training programs to prepare individuals for union apprenticeship in the trades.
- Job training for school staff: Workforce development programs for school workers, including energy efficiency training for operations and maintenance staff, green janitor education programs, and school-wide sustainability and conservation training.

- BMS Control Upgrades: upgrading Building Managements Systems (BMS) computer-based control systems to automate or better monitor factors such as ventilation, lighting, power systems, security systems, etc.
- Insulation (Pipes, Tanks, Boilers): Improving insulation to ensure that schools are more weather-resistant. It includes increasing the efficiency of heat transfer, and reducing the likelihood of freezing infrastructure.
- Upgrades to Controls: (Boiler, Heating Plant, HVAC, Pumps and Motor, Refrigeration Controls): Upgrading controls of equipment to better time, program, monitor and adjust their use. Having better control systems can increase efficiency and boost the overall performance of the building.
- Optimization: (Steam System, Demand-Controlled Ventilation): Optimizing systems in the building, including steam and ventilation, to ensure that their use is dependent on the needs and number of people in the building.

While this list of recommended upgrades can seem costly, they actually save money in the long run for schools and districts. The total estimated cost for powering all NYC public schools is roughly \$14.5 billion. By instituting these retrofits the amount of CO<sub>2</sub> that would be saved is about 739,126 metric tons CO<sub>2</sub>E. This is the equivalent of taking about 161,000 cars off the road or planting over 400,000 trees. The average cost savings per year for schools would be approximately 35%, translating to \$73.4 million a year.

Not only will schools see significant cost savings, but these programs can also provide many good paying union jobs in the community. A medium estimate of jobs created with solar and retrofit installation and manufacturing estimates that approximately 68,778 jobs can directly be created from these programs. Retrofitting schools is an investment in the whole community.

The funds needed for making some of these crucial improvements to schools are available through ARP funds. ARPA appropriated \$130 billion in funding for K-12 public schools to address the COVID-19 public health crisis. Funding follows the Title I education funding formula, which tracks poverty. The program is administered by the U.S. Department of Education and funds are awarded through the federal Elementary and Secondary School Emergency Relief (ESSER) Fund. The New York City Department of Education will receive \$4.8 billion in ESSER funding that can be used to reopen schools safely and improve indoor air quality. Eligible expenses include upgrading school HVAC systems , installing air filters and purifiers, and replacing inefficient windows and doors.

ARPA also appropriated \$350 billion in state and local government relief through the U.S. Treasury Department’s Coronavirus State and Local Fiscal Recovery Funds (“Fiscal Recovery Funds”). Funding is allocated based on several federal grant formulas, including the Community Development Block Grant, which considers poverty and population. The City of New York and the five boroughs will receive a combined \$5.9 billion in Fiscal Recovery Funds, which can be used to fund a broad array of government services, including building maintenance and infrastructure projects.

Many core components of Carbon Free and Healthy Schools, including general school infrastructure and energy efficiency projects, could be funded by these federal programs. Allocating a portion of ESSER funding for facility retrofits, alongside other sources of federal and local funding and financing, is a crucial part of achieving Carbon Free and Healthy Schools in New York City. We are calling on the Education Committee to make sure these funds are appropriately allocated to the schools so that they can begin this vital work. This is New York City’s opportunity to take school investments to scale—enlisting federal support and building on earlier work to put solar on some New York City schools—and

implement energy-efficiency retrofits and solar power across our school buildings. Together, we can make New York City schools a model of green infrastructure, make schools healthier and safer for students and the school community, create good union jobs, and save schools millions in energy costs.

Thank you for your time.