



# Environmental Policy Commission Meeting

May 20, 2024





# Essential Questions

1. What is ACPS doing to reduce energy use and carbon emissions in our buildings?
2. What are the methods that ACPS uses to approach resilience and sustainability?
3. How does ACPS incorporate sustainability into modernizations?





# Reducing Energy Use

ACPS remains committed to integrating diverse sustainability measures into both new construction projects and existing school facilities, aiming to enhance energy efficiency, reduce carbon footprint, and minimize emissions.



## LEED Certification

All newly constructed ACPS buildings and facilities are designed to obtain LEED certification.

## HVAC Upgrades

ACPS is currently the HVAC system in its entirety over the next 1-3 years through a phased approach. This work also includes upgrading the building automation system to enable central and energy efficient control of the building.

## Lighting Upgrades

ACPS has and continues to replace fluorescent lighting with LED lighting in existing buildings. LED lighting converts the majority of their energy into light, with minimal heat waste. Additionally, LED lights use less power than fluorescent lights which contributes to more favorable environmental outcomes.

## Renewable Energy

Every recently built ACPS roof is engineered to support the installation of solar panels.



RESULTS-DRIVEN

# Reducing Carbon Emissions

## School Bus Electrification Project

- ❖ Metropolitan Washington Council of Governments 2023 Climate and Energy Leadership Award Winner
- ❖ 15 electric buses and charging stations, the second largest Electric Vehicle fleet in Virginia





# Plans for Resilience

<p><b>Temperature Increases</b></p>	<p>✓</p>	<ul style="list-style-type: none"> <li>• Use of organic infill material for athletic fields in lieu of rubber infill</li> <li>• Preservation of existing trees for new construction when possible</li> </ul>
<p><b>Extreme Rainfall and Storms</b></p>	<p>✓</p>	<ul style="list-style-type: none"> <li>• Bioretention</li> <li>• Dry swales</li> <li>• Permeable pavement</li> <li>• Underground detention systems</li> </ul>





# Initiatives & Approaches

Environmental Assessments for New Construction

Facility Needs Assessments Every Five Years For Existing Facilities



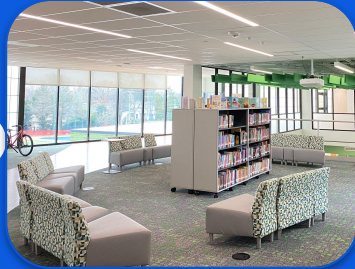
Collaboration with Alexandria Transportation & Environmental Services

Collaboration with the Office of Climate Action





# New Construction



- ❖ Geothermal well field
- ❖ Photovoltaic Solar Array
- ❖ Stormwater treatment through green infrastructure
- ❖ Currently performing at approximately 16.5 EUI, one of the top performers in the nation.
- ❖ Monthly energy bills have shown cost per square foot is less than half that of older schools.



- ❖ Geothermal well field
- ❖ Photovoltaic Solar Array
- ❖ Dry swales
- ❖ Permeable pavements
- ❖ Emphasis on daylighting and natural light



# Future Sustainability Goals



- Energy Manager appointed through a consultancy
  - New construction projects always involve consultants who work towards the goals of ACPS and the City of Alexandria.
- Development of a multi-departmental Resilience and Sustainability Plan as CIP funding and staffing allows.





Alexandria City Public Schools

# Questions?

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