MCPS Sustainability Updates

November 2025

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Montgomery County Public Schools
UNLEASHING POTENTIAL

ALLPPT.com

Agenda

Updates since 2023 when we last met!

1. New Staff - Introducing Richard Benjamin
2. Background
3. GHG Inventory
4. Progress on Decarbonization
   - Energy Conservation (projects and engagement)
   - New building design
   - Renewable/Clean Energy
   - Transportation
5. Other projects

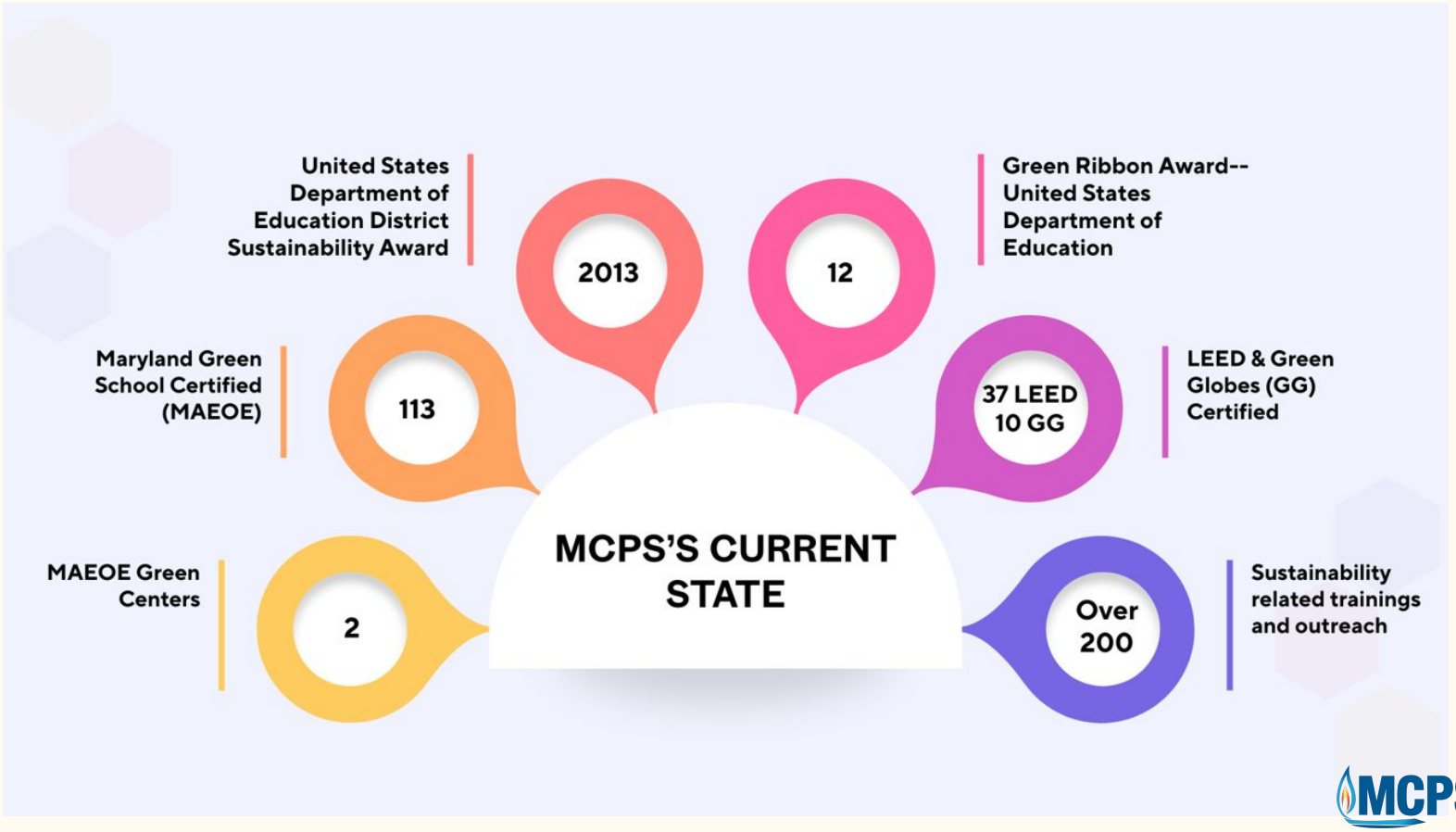
MCPS

Where does Climate Action begin for MCPS?



On June 28, 2022, the Montgomery County Public Schools Board of Education unanimously adopted a transformative sustainability policy, titled *Policy ECA, Sustainability*.

- Target to cut greenhouse gas emissions by 80% by 2027, and 100% by 2035 compared to 2005 levels.
- Minimize environmental impact and operational costs with practices meeting the immediate needs of the school system without compromising future generations
- Provide opportunities for students and staff to engage in actions that contribute to climate solutions, preparedness/adaptation/resiliency.



MWCOG: 2025 Climate and Energy Leadership Award

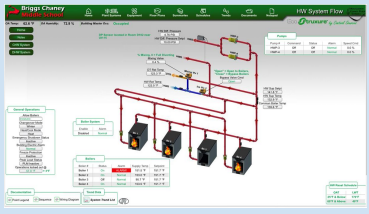


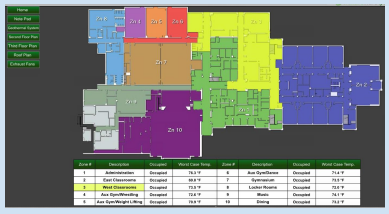
- Educational Institution Sector Award: Montgomery County Public Schools' Indoor Air Quality Monitoring Network
- The initiative included deployment of environmental sensors in every classroom, media center, and cafeteria across the school district.
- Helps target trouble spots to proactively monitor energy use and pursue broader sustainability/resiliency goals

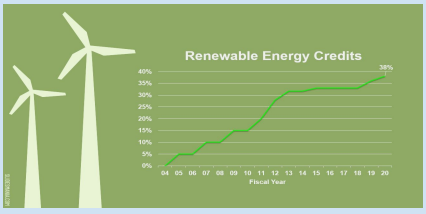
https://www.mwcog.org/newsroom/2025/10/08/cog-awards-local-governments-organizations-for-climate-and-energy-innovation-/

Sustainability in our Facilities (2025 YTD)

All schools have Building Automation Systems and benefit from MCPS clean energy purchases







40 with green roofs

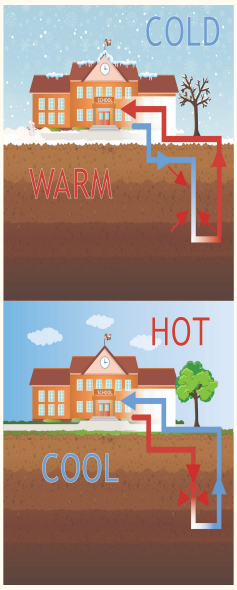


87 with Bioretention ESD



24 solar roof PV PPA 6.8 MW





32 with geoexchange

Culture Change - Student Engagement







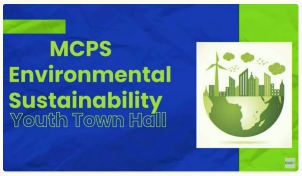












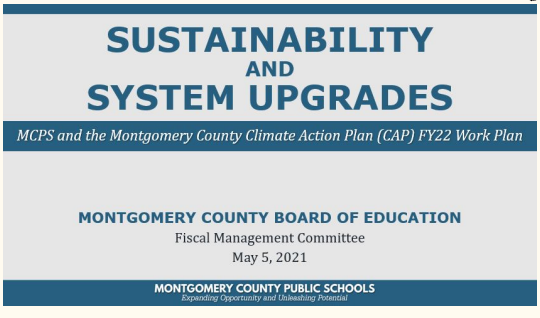


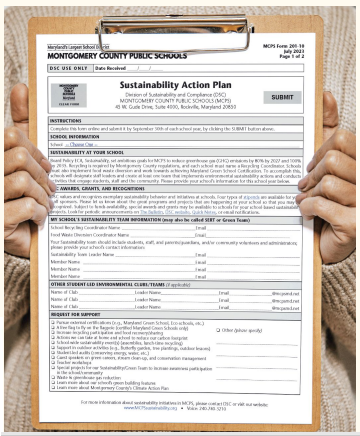






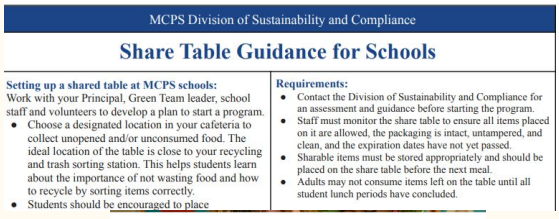
Culture Change - Adults (Top -> Down)



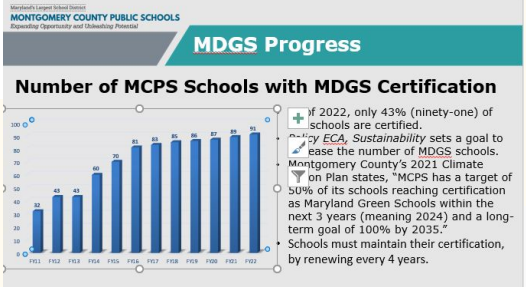














MAEOE Maryland Association for Environmental & Outdoor Education

GHG Inventory

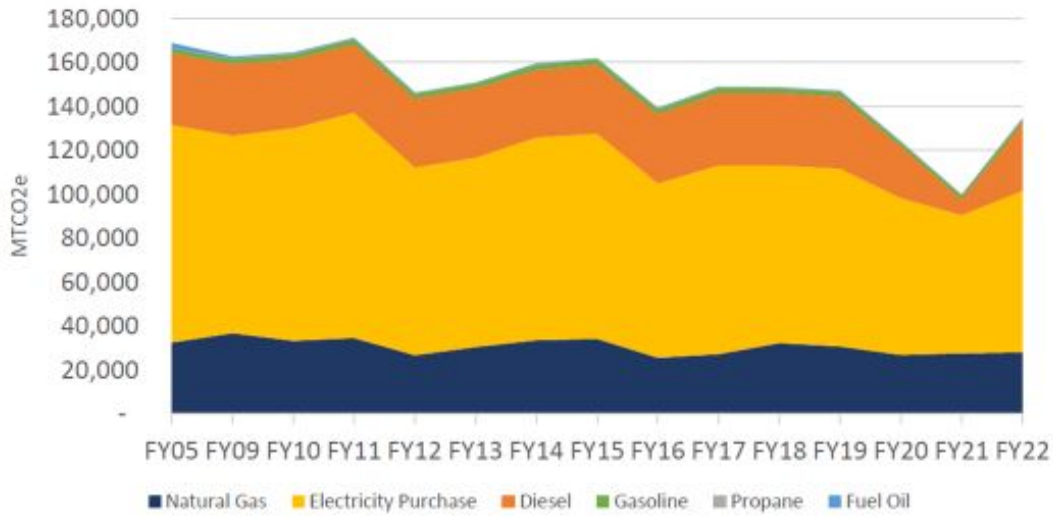


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MONTGOMERY COUNTY PUBLIC SCHOOLS
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MCPS GHG Emissions Data

Between Fiscal Year (FY) 2005 and FY 2022, MCPS **reduced** GHG emissions by **20.3%**

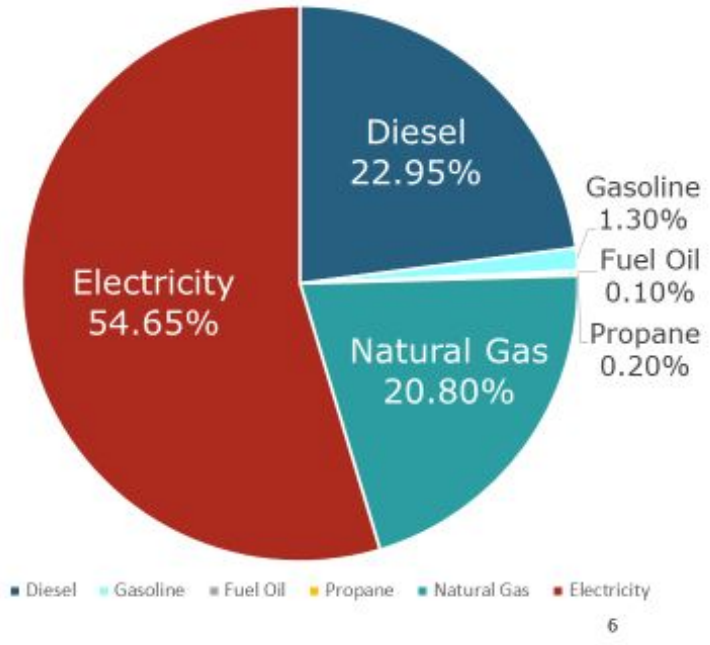
Figure 1: Annual GHG Emissions by Fuel Type



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Expanding Opportunity and Unleashing Potential

Our GHG Emission Sources

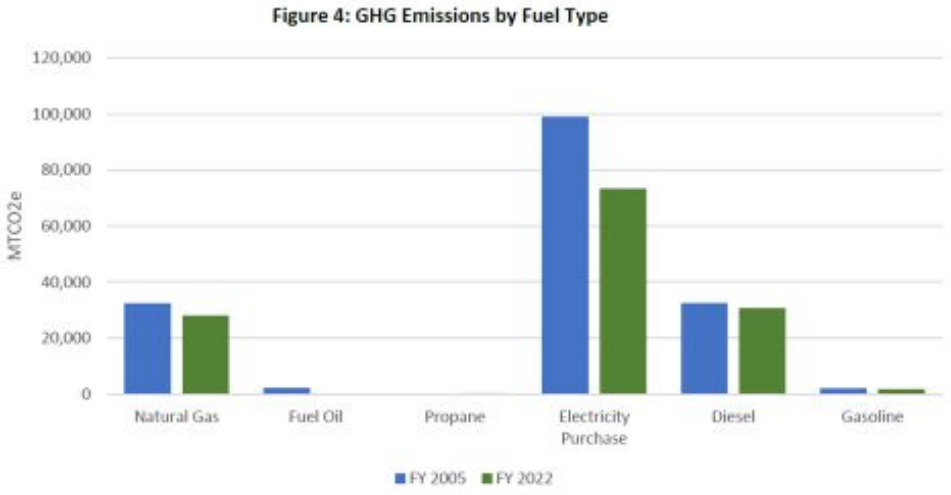
- The three largest sources of GHG emissions in MCPS are
  - Electricity (55%);
  - Diesel fuel used by the fleet (23%); and
  - Natural gas used in school buildings (21%).
- Fuel oil tanks have been removed at all but one site.



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MCPS GHG Emissions Data

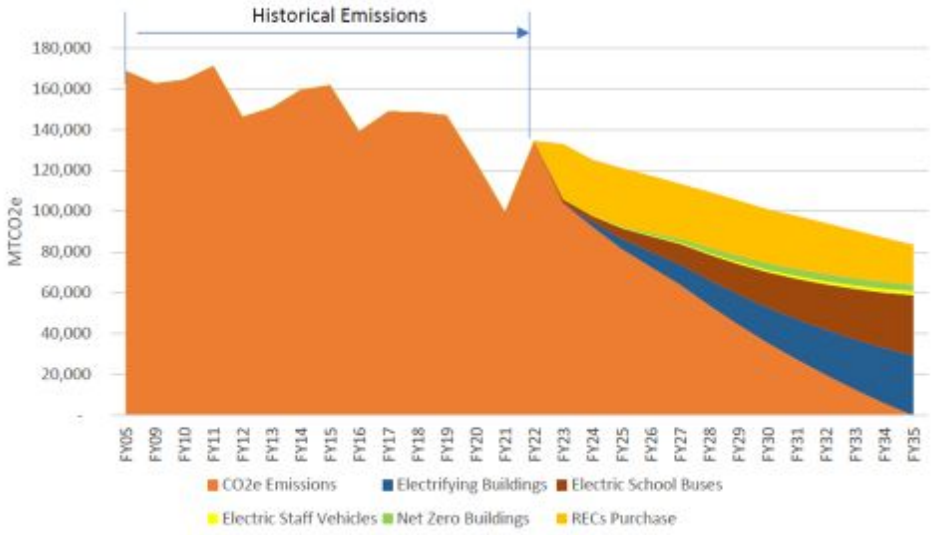
The reduction in our emissions has been achieved by purchasing cleaner energy and modifying our consumption behaviors.



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Acting to Reduce Emissions

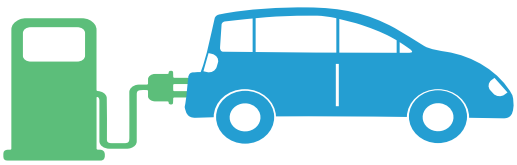
Figure 11: GHG Reduction Impact of Mitigation: Moderate Scenario

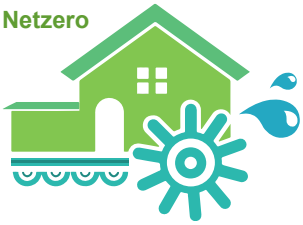


What does GHG reduction mean for MCPS?



- Curriculum enhancement
- Use technology to reduce consumption
- Enhance behavior-based sustainability programs & opportunities to act
- Replace service fleet with electric (& other new tech) vehicles
- Design buildings to increase sustainability and resiliency
- Improve existing infrastructure for energy savings
- Increase resiliency and awareness
- Establish procurement guidelines for sustainability
- Collocate schools with other governmental facilities







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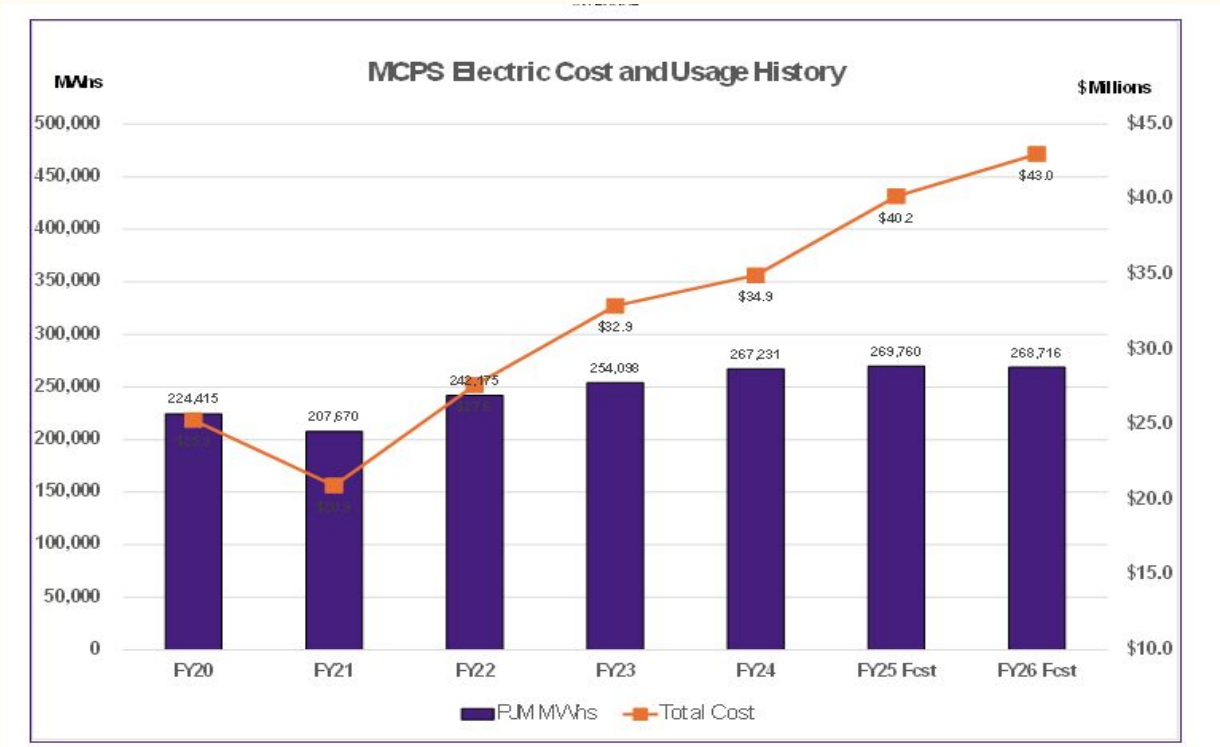
Progress on Decarbonization



Improving Efficiency in Existing Schools

- MCPS School Board Resolution passed on September 8, 2022 to select an energy savings performance contractors
- Conduct Investment Grade (Energy) Audits
- Based on results, MCPS to implement capital investment retrofits and energy services funded from savings





Electric use is relatively steady (despite adding sf), but unit costs rising

Progress: Energy Conservation

Energy Conservation Measures at 50 schools

100% Investment Grade Audit
Energy Performance Contracting Services
for Montgomery County Public Schools

AMERESCO

Table 4: ECM Matrix

Montgomery County Public Schools Energy Conservation Measures (ECMs)	Baseline Adjustment	Lighting Upgrades - Fixture Replacement	Domestic Water Conservation Upgrades - Flush Valve Replacements	Retro-Commissioning	BAS Upgrades	Building Envelope Improvements	Cooling Tower VFDs	SZ CV to SZ VAV AHU Conversion	Cooling Tower Deduct Meter	Rooftop Solar PV	Transformer Replacements	Capital Improvement Allotment	
Facility	**BA**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	
Rolling Terrace ES	X	X	X	X		X					X		
Fairland ES	X	X	X		X	X			X				
Pine Crest ES	X	X	X		X	X		X			X		
King, Dr. Martin Luther Jr. MS	X	X	X	X		X			X	X	X		
Springbrook HS	X	X	X		X	X	X				X		
Cedar Grove ES	X	X	X		X	X							
Loiederman, A. Mario MS	X	X	X	X		X						X	
Greencastle ES	X	X	X		X	X					X		
Germantown ES	X	X	X	X		X			X	X			
Rocky Hill MS	X	X	X		X	X			X				
Georgian Forest ES	X	X	X	X		X					X		
Rockville HS	X	X	X	X		X	X				X		
Newport Mill MS	X	X	X		X	X			X		X		
Laytonsville ES	X	X	X	X		X							
Gaithersburg HS	X	X	X		X	X			X				
Belmont ES	X	X	X	X		X					X		
Somerset ES	X	X	X		X	X					X		
Great Seneca Creek ES	X	X	X	X		X							
Goshen ES	X	X	X		X	X					X		
West, Julius MS	X	X	X		X	X	X		X				
Woodfield ES	X	X		X		X					X		
North Chevy Chase ES	X	X	X		X	X					X		
Farmland ES	X	X	X		X	X							
Cabin John MS	X	X	X	X		X							
Carderock Springs ES	X	X	X	X		X							

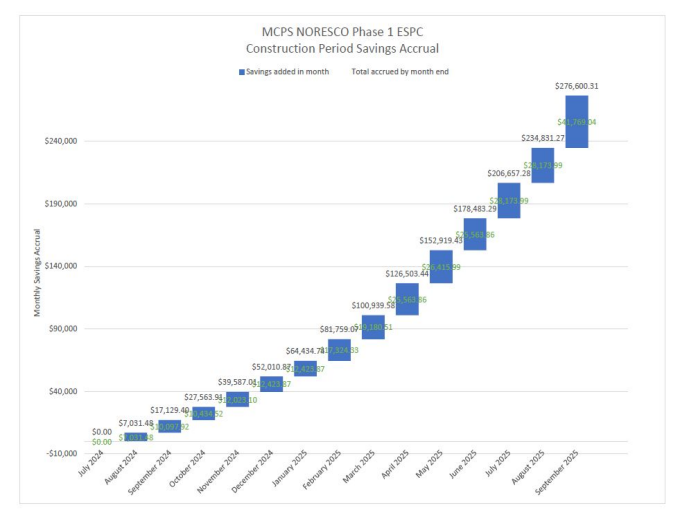
Montgomery County Public Schools
Energy Performance Project

NORESCO

Option E ECM Matrix

School	LED Lighting	Water Conservation	Pre-Rinse Sprayers	Cooling Tower Deduct Meters	HVAC	RCx	Building Envelope	Aeroseal	Cooler Controls	Window Film	CO Team	Rate Switch
Bannockburn Elementary School	X	X	X			X	X					
Beall Elementary School	X	X	X			X						
Candlewood Elementary School	X	X				X	X					
Cashell Elementary School	X	X				X	X					
Darnestown Elementary School	X	X				X	X					
Dr. Charles R. Drew Elementary School	X	X				X						
East Silver Spring Elementary School	X	X		X		X				X		
William H. Farquhar Middle School	X					X	X	X				
Fox Chapel Elementary School	X	X				X						
William B. Gibbs, Jr. Elementary School	X	X				X	X					
Glen Haven Elementary School	X	X	X			X	X			X		
Glenallan Elementary School	X	X				X	X					
Walter Johnson High School	X	X	X	X		X	X	X		X		
John F. Kennedy High School	X	X	X			X		X				
Lathrop E. Smith Environmental Education Center	X	X			X		X					
Dr. Ronald E. McNair Elementary School	X	X	X				X					
Montgomery Village Middle School	X	X	X		X	X	X	X		X		
Parkland Middle School	X	X		X		X		X				X
Ridgeview Middle School	X	X		X		X	X	X		X		
Rosemont Elementary School	X	X	X			X	X					
Wayside Elementary School	X	X		X		X						
Hallie Wells Middle School	X					X	X	X				
Wheaton High School	X			X		X	X					X
Whetstone Elementary School	X	X				X	X					
Wyngate Elementary School	X	X				X	X					

Examples of realized results (fiscal and conservation):



- Identified rate reductions
- Added sewer deduct meters for immediate sewer bill credits
- Implemented building envelope improvements, retro-commissioning, lighting retrofits and HVAC repairs/replacements to conserve more energy
- Complete this winter

Sample electrical consumption reduction (Wheaton HS)

Wheaton HS:

Unit A:



- ECM very effective at Wheaton HS - 33% reduced energy consumption YoY.
- Ballpark estimate of savings here are ~ 430,000 kWh

New building design: Poolesville HS



First MCPS Net Zero School - Burtonsville ES (2026)

REPLACEMENT FACILITY

BURTONSVILLE ELEMENTARY SCHOOL



14709 Saddle Creek Drive
Burtonsville, Maryland 20866

Clean Energy: 24 Rooftop Solar (PPA)

(8 locations/7 new sites added in 2025)

Facility code	School	Year
249	Clarksburg HS	2008
229	College Gardens ES	2008
201	Richard Montgomery HS	2008
522	Lakelands Park MS	2008
125	Quince Orchard HS	2009
311	Francis Scott Key MS	2009
779	Sargent Shriver ES	2009
812	Parkland MS	2009
562	Redland MS	2016
545	Watkins Mill HS	2016
503	Sherwood HS	2016
778	Sligo MS	2016

Facility code	School	Year
789	Albert Einstein HS	2018
345	Hallie Wells MS	2018
157	Roberto Clemente MS	2018
155	Rosa M. Parks MS	2018
427	Walt Whitman HS	2018
521	Shady Grove MS	2025
240	Maryvale ES	2025
798	Springbrook HS	2025
501	Sherwood ES	2025
211	Julius West MS	2025
230	Rockville HS	2025
232	Tilden MS	2025



Clean Energy: Owned Solar (through ESPC)



- Install in progress at 2 sites
- Will offset at least 80-90% of power consumed at King MS and Germantown ES
- Expected online later this year
- $100K annual operating savings

Clean Energy: Two off-site Solar Farms

- Hall Property and Claggett Farm, located in Prince George's County
- Solar energy generated is distributed in a “waterfall” method to four schools each
- Hall Property (4.2 MW) has the potential to provide energy to:
  - Spark Matsunaga ES, Bayard Rustin ES, Potomac ES, & Luxmanor ES
- Claggett Farm (4 MW) has the potential to provide energy to:
  - Garrett Park ES, Roscoe Nix ES, Galway ES, & Judith Resnik ES
- Potential for 3rd site under exploration

Photo Credits to Standard Solar







Progress: Transportation



Progress: Transportation



- Battery Electric Vehicle
  - Seven cargo vans in operation
  - Two more on order
- Plug-in Hybrid Electric Vehicles
  - Four in operation
  - Three more on order
- Hybrid Vehicles
  - 14 in operation
- EV Buses–285 buses in operation
- EV Chargers for fleet vehicles:
  - 4 dual port Level 2 charging stations
  - 3 dual port Level 2 charging station in progress
- EV Chargers for public:
  - At CESC and Gaithersburg Middle School by PEPCO
  - Partnership with Montgomery County, stations will be added at Paint Branch and Gaithersburg High Schools

Other Areas



Green Schools, Waste Reduction, Food Recovery











- Met CAP goal of 50% in 2025 - ahead of the state's extended deadline!
- 91% of schools submitted the School Action Plan
- Recycling rate-72%
- Food recovery at nearly 100 schools
- Annual Drive for Supplies



Curriculum Updates

- Continuing Support of High School Meaningful Watershed Educational Experience (MWEE)
  - Summer In Person Training and Development for educators
  - Fall Virtual Training-community science applications w/ student-collected data
  - Ongoing support through equipment loans and co-teaching, coaching
- Environmental Justice course since Spring 2023 @ Whitman HS
- Climate Change course initiated during 24-25 @ Northwood HS
- Youth Climate Institute chapter(s) beginning in MCPS
- Partnership with Glenstone (field trips, Green Center)

Living Schoolyards/Outdoor Classrooms

National Fish and Wildlife Foundation: $500,000

Design and construct outdoor classrooms at six (6) locations to be integrated with green stormwater infrastructure



Chesapeake Bay Trust via City of Rockville: $95,000

Design and construct an outdoor classroom at College Gardens Elementary School



#MCPS*forward*

MONTGOMERY COUNTY PUBLIC SCHOOLS Maryland

MCPS

Resilience - REACH Hub and other SWM upgrades





Next steps



Next Phase Solar “Request for Proposals” (RFP) (14+ schools)

Phase 2 Audits to identify opportunities for new ESPC

Data dashboard (internal/external)

- Partnering with Utilities to conduct virtual commissioning
- Real-time interval data monitoring system
- AMI Smart Meter pilot with WSSC @162 schools will have real-time data

Continue to pursue funding, Green Bank, incentives/rebates, grant opportunities:

- Maryland Energy Administration FY 26 Decarbonizing Schools Grants

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Questions?

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