

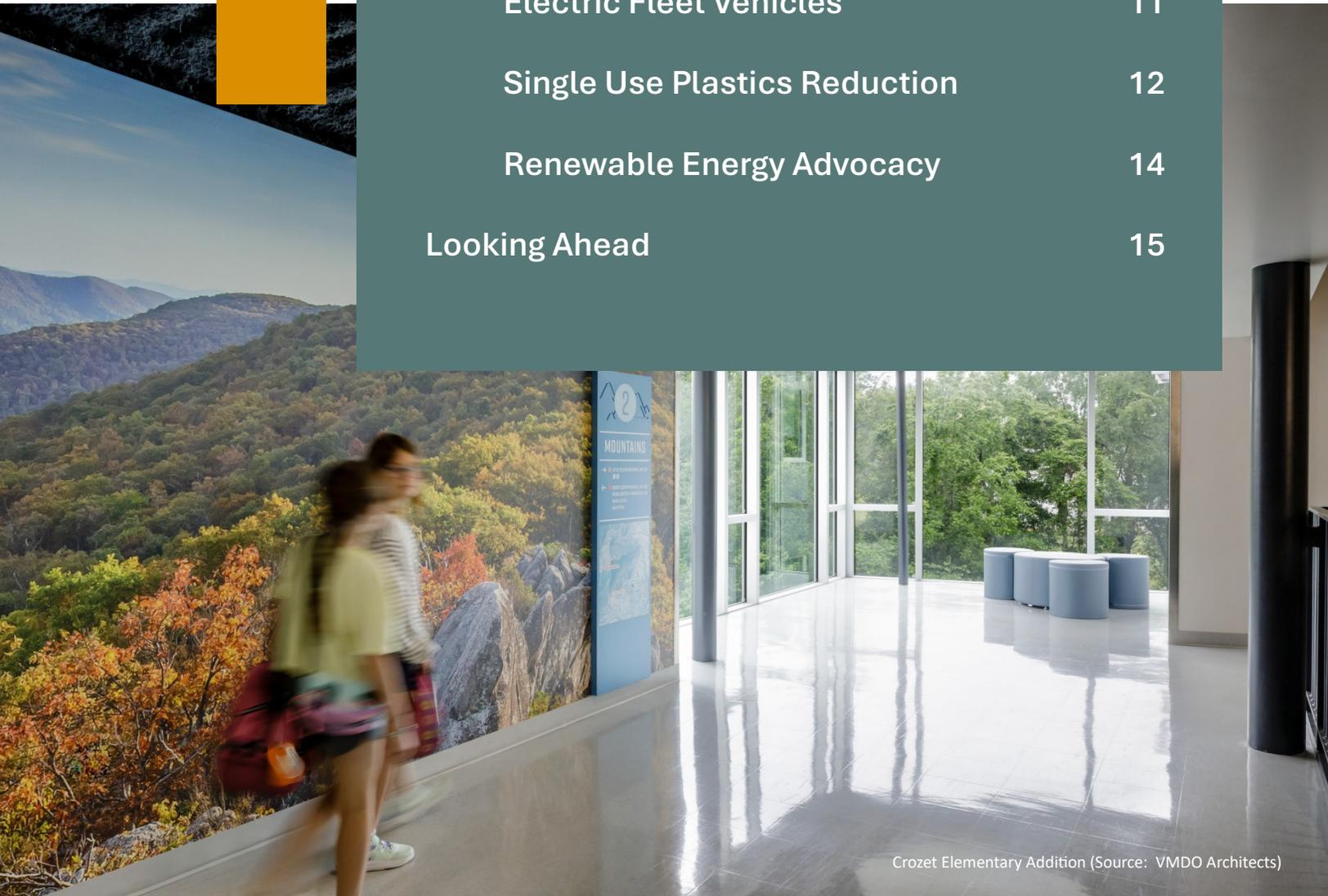
# Advisory Committee for Environmental Sustainability (ACES)

**2024 - 2025 Annual Report**



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Crozet Elementary Addition (Source: VMDO Architects)

# PURPOSE AND MEMBERSHIP

## Purpose

The Advisory Committee for Environmental Sustainability (ACES) advises and informs the School Board and Superintendent about measures to help Albemarle County Public Schools (ACPS) develop and reach sustainability goals and foster an integrated series of tools and knowledge for the growth of environmental awareness.

A significant part of ACES' mission will be to guide and coordinate the implementation of the County's Climate Action Plan as it relates to schools. Implementation will involve goals related to the five sectors of the Climate Action Plan:

- Transportation & Land Use,
- Buildings & Renewable Energy,
- Sustainable Material Management,
- Landscape & Natural Resources,
- Curriculum Integration of Sustainability

In addition, the School Board may identify issues of interest for ACES to investigate and make recommendations.

## Membership

ACES is comprised of citizens appointed by the School Board and Superintendent, student & staff appointees, and the Albemarle County Climate Action Program Manager. School Board and Board of Supervisors members serve as liaisons to the committee. Staff provide support and technical expertise.

### Board Appointees

Keith Boisvert (At-Large)  
 Rebecca Duff (Rivanna)  
 Joshua Grizzle (Jack Jouett)  
 Greg Swanberg (Samuel Miller)  
 Betsey Soulsby (Rio)  
 Christine Hirsh-Putnam (Scottsville)  
 Vacant (White Hall)

### Superintendent Appointees

Sarah Delgado  
 Bruce Vlk  
 Vacant (Student)  
 Vacant (Staff)

### Climate Action Program Manager

jamie powers

### Board Liaisons

Diantha McKeel (Board of Supervisors)  
 Judy Le (School Board)  
 Graham Paige (School Board)

### ACPS Staff

Katina Dudley (Coordinator of Science Department)  
 William Shifflett (Deputy Director of Transportation)  
 John Coles (Environmental Project Manager)  
 Nicole Durham (EH&S Specialist)

# SUSTAINABILITY UPDATES

## Solar Energy at ACPS

ACPS currently has 4.8 Megawatts (DC) of rooftop solar projects underway at 11 schools, in various stages of development. Installation of the earliest projects is scheduled for winter and spring of 2026. Upon completion, 17 ACPS school facilities will be powered either partially or entirely by solar energy.

These projects are being pursued through a combination of self-owned solar installations, where ACPS owns the solar panels outright, and Power Purchase Agreements (PPAs)—a type of public-private partnership. ACPS is prioritizing solar energy as a low-cost, renewable energy solution that supports both environmental and financial sustainability goals.

Together, these projects are expected to generate approximately 6,500 MWh per year (33% of total electricity use) and save ACPS an estimated \$10 million over 25 years.

## Solar Education

Through ACPS’s partnership with Madison Energy Infrastructure (MEI) on solar PPA projects, students have gained hands-on experience with solar energy, electrical circuits, energy transformations, and potential careers in the solar industry. These lessons are aligned with Virginia’s Standards of Learning (SOL) and were provided to all 5th-grade students at Woodbrook and Agnor Elementary Schools. Students at the Newcomer Learning Center created solar circuits with motors, then used the motors to create spin art. In addition, “teach-the-teacher” sessions were offered at ACPS’s *Making Connections* events, equipping educators to bring these lessons directly into their classrooms.

*Right: Students from the Newcomer Learning Center use solar panels and circuits to create colorful spin art.*



## Sustainability Liaison Program

As the Sustainability Liaison program enters its third year, it continues to exceed expectations, showcasing the creativity and passion of ACPS students and educators in reducing their schools' environmental impact. For the 2024–2025 school year, the program expanded to 13 schools. Beginning in the 2025–2026 school year, the program was formally funded and incorporated into the division's Academic Leadership Compensation Program (ALCP), managed by the Human Resources Department.

Sustainability Liaisons extend the work of ACPS Operations departments into classrooms, engaging students and coordinating sustainability initiatives within each school. While they are encouraged to promote a wide range of sustainable practices, they hold specific responsibility for the success of school-based recycling and cafeteria composting programs. In addition, they identify opportunities to reduce carbon emissions and environmental impacts through both behavioral and operational changes.

Highlights from the 2024–2025 cohort include:

- **Monticello High School** – Under the leadership of Sustainability Liaison Erikka Goff, the Environmental Club launched a bathroom paper towel composting program. Students collected used paper towels from bathrooms, removed contamination, and added them to the school's composting system.
- **Albemarle High School** – Led by Sustainability Liaison Diana Weber, the *Make a Change* club collected plastic film waste, such as grocery bags, and repurposed it by knitting sleeping mats that were donated to homeless shelters. The club was awarded UVA's Sustainability Leadership Award, making it the only high school group ever to receive this recognition.
- **Mountain View Elementary School** – Sustainability Liaison Mary Morales's work led to Mountain View being a recipient of the National Wildlife Federations' EcoSchools award. The school Sustainability Team, comprised of students, teachers, and administrators hosted a community wide Earth Day celebration highlighting the sustainable work of students and offering sustainable workshops for families and led several 'Family Challenges' encouraging students and their families to engage in sustainable activities and habits.

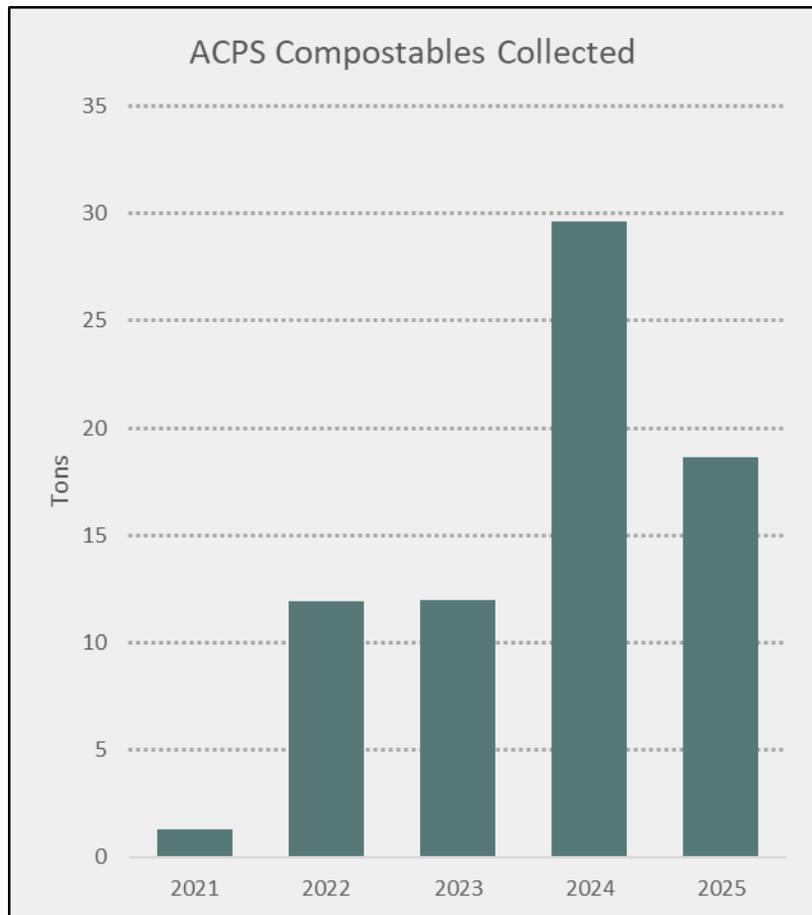
## Composting & Recycling at ACPS

Volunteers from ACES and the County’s Solid Waste Alternatives Advisory Committee (SWAAC), working in partnership with ACPS Sustainability Liaisons, staff, and student groups have significantly increased composting participation and education across the division. In 2025, several additional schools launched cafeteria composting programs. At many of these schools, Sustainability Liaisons have also established student-led Green Teams or Environmental Clubs that help monitor compost collection and guide peers in identifying compostable materials.

In 2024, the total amount of compostable waste collected exceeded all previous years combined—diverting 30 tons of waste from the landfill and preventing an estimated 12.5 tons of greenhouse gas emissions. Early data from 2025 suggests that the division is on track to set another record for composting participation and waste diversion.

Likewise, several schools have been exploring ways to improve recycling participation. Walton Middle set up stations in each classroom for the collection of waste copy paper. Clean recycled copy paper is a valuable waste stream. Students, under the leadership of sustainability liaisons Heather Kepple and Jennifer Peart weighed the paper collected prior to delivering it to the

McIntire Recycling Center. Walton custodian, Melvin Bradley, collected cardboard boxes throughout the school year for staff use at the end of the school year. As such, Walton Middle did not require any purchased boxes for this purpose, reducing waste and saving resources.



Above: Bar Chart of Compost Collected (in tons) from 2021 to mid-year 2025

## Building's Energy Efficiency and Emissions

School Board Policy [FEH, Energy Management and Conservation](#), establishes broad goals for the “cost-effective and environmentally responsible use of energy throughout its facilities” and affirms support for the Albemarle Climate Action Plan. Through targeted investments in energy-efficient technologies—such as LED lighting, geothermal HVAC systems, and improved building envelopes—ACPS has achieved a steady reduction in energy consumption, reaching record-low usage in 2024 despite continued growth in facility square footage.

Greenhouse gas emissions associated with building energy use have also declined steadily over the past 16 years. These reductions have outpaced overall energy use declines due to the electrification of ACPS buildings, the addition of onsite renewable energy, and the increasingly clean energy mix of the regional electric grid.

### Key highlights related to energy efficiency include:

- **Record-low building energy consumption in 2024**, despite expanded facility space.
- **Building-sector greenhouse gas emissions** have remained below the division’s 2030 target of a 45% reduction since 2019.
- **All ACPS school buildings qualify for ENERGY STAR certification**, with an average score of 99 out of 100—placing them, on average, in the top 1% of comparable school buildings nationwide.



Above: Chart of building energy use & emissions 2008 - 2024

## Conservation Mowing

As the program's third full year concludes, native wildflowers and other grassland species have begun to naturally reestablish, restoring biodiversity that was previously diminished under monoculture turf maintenance. This resurgence extends beyond plant life: this year, students at Walton Middle School partnered with grassland bird specialists from the Piedmont Environmental Council to learn wildlife observation and data collection techniques. Among their sightings was the grasshopper sparrow, an obligate grassland species whose population has declined significantly due to habitat loss.



*Above: Milkweed blooms in Ivy Elementary's Conservation Mowing Areas*

# ACES RECOMMENDATIONS

In alignment with the [ACPS Strategic Plan \(Learning for All\)](#) and the [Albemarle County Climate Action Plan](#), the Advisory Committee for Environmental Sustainability offers the following recommendations for consideration by the School Board and Superintendent. These recommendations are intended to advance the division's commitment to environmental stewardship, operational efficiency, and educational excellence.

The proposed actions support the Strategic Plan's emphasis on *environmental responsibility, resource stewardship, and innovative learning environments*, while furthering the Climate Action Plan's goals to reduce greenhouse gas emissions, increase the use of renewable energy, and promote sustainable practices across all operations.

Together, these recommendations aim to strengthen ACPS's role as a leader in sustainability by improving operational policies, supporting clean transportation initiatives, and advocating for clean energy.

## **Recommendation 1: Adoption of Idling Reduction Language in Policy EEBA**

Reductions in vehicle idling have been shown to have numerous benefits including:

- **Health:** Lowering vehicle emissions has a direct and positive impact on human health, especially for children and individuals with pre-existing respiratory conditions—by reducing exposure to pollutants such as particulate matter and nitrogen oxides, both of which are linked to asthma and other respiratory illnesses. This is particularly important for school-aged children, whose lungs are still developing and who breathe at higher rates than adults.
- **Environmental:** Turning off engines when not in use reduces greenhouse gas emissions, air pollution, and fuel consumption. According to the U.S. Environmental Protection Agency (EPA), an idling vehicle emits up to 20 times more pollution than one traveling at 30 miles per hour. An [Environmental Defense Fund article](#) states that one pound of CO<sup>2</sup> is released every 10 minutes that a vehicle idles.
- **Financial:** Idling reduction can translate to reduced fleet operational costs by avoiding unnecessary fuel consumption, decreasing engine wear and maintenance costs, and prolonging vehicle life.

ACES recommends that the School Board approve amendments to [Policy EEBA, County and Division-Owned Vehicles for Division Business](#), to incorporate idling reduction requirements for the division's light-duty fleet vehicles. The proposed language is intentionally broad, allowing each

operational department to develop its own standard operating procedures that align with this policy while addressing specific operational needs.

ACES proposes adding the following language to the policy:

*Division employees shall operate vehicles in a manner that minimizes operational costs and impacts to the environment.*

Additionally, ACES recommends adding the following language to the 'Procedures for Compliance' section of the policy:

*Light duty, division owned vehicles, regardless of fuel type, will not be parked with the engine operating (idling) for more than 5 consecutive minutes unless one of the exceptions below applies. When engines must be left operating, for any reason, the operator will remain with the unit.*

**Exceptions:**

- *Vehicles that are required to idle to operate auxiliary equipment (including but not limited to hydraulic equipment, welding equipment, pumps, compressors, or lights).*
- *Vehicles that are equipped with temperature sensitive equipment.*
- *Vehicles that must be kept at an appropriate temperature for the health and safety of occupants.*
- *Vehicles and equipment that are being serviced; times when actual mechanical work is being performed on a vehicle that necessitates the engine needs to idle for a longer period.*
- *Heavy-duty diesel-powered motor vehicles (GVWR >8500 lbs.), idling for the purpose of start-up, for a period of up to fifteen (15) consecutive minutes when the ambient temperature is less than 32°F (0°C), and/or until the air pressure on the vehicle has reached the proper operating PSI.*

**Definitions:**

*"Light Duty Vehicle" means any vehicle powered by gasoline, diesel, electricity, natural gas, propane, or a combination thereof, with a gross vehicle weight of 14,000 or less.*

Implementing idling reduction practices supports the School Division's commitment to environmental stewardship, operational efficiency, and community health. This policy aligns with the [Albemarle County Climate Action Plan](#) by directly reducing greenhouse gas emissions, improving air quality for students and staff, and modeling responsible behavior within our community.

## Recommendation 2: Electric Vehicle Fleet Goal

In addition to idling reduction, ACES recommends further addressing greenhouse gas emissions from the transportation sector by transitioning ACPS's light-duty fleet to electric vehicles (EVs) as part of the regular vehicle replacement cycle. The transportation sector remains the largest source of greenhouse gas emissions in Albemarle County. Transitioning to EVs will improve fuel efficiency, lower operational costs, and significantly reduce emissions associated with division operations.

Beyond reducing greenhouse gas emissions, electric vehicles also eliminate harmful tailpipe pollutants, improving local air quality and contributing to healthier school environments. In addition, EV adoption shifts emissions from direct (Scope 1) sources—those produced by the onsite combustion of fossil fuels—to indirect (Scope 2) emissions generated by electricity production. These indirect emissions can be offset through renewable energy generation or renewable energy credit (REC) purchases, further advancing division sustainability goals.

ACES strongly recommends that the school board support the following SMART goal:

**Goal:** *ACPS will purchase light-duty Electric Vehicles during normal vehicle replacement cycles, beginning in Fiscal Year 2027. For all vehicles being considered for replacement, the Vehicle Replacement Committee will evaluate whether a comparable Battery Electric Vehicle (EV) is available for purchase. This evaluation will consider vehicle use characteristics necessary for conducting comparable School Division business including body type, function, weight rating, towing capacity, and daily mileage.*

**Implementation:** *The vehicle replacement committee will replace 100% of vehicles for which a comparable EV is determined to be available with EV's each year.*

**Reporting:** *If comparable EV's cannot be purchased for 100% of vehicles, the vehicle replacement committee will submit a notice to the School Board explaining why the goal was not achieved;*

This goal aligns directly with the ACPS Strategic Plan, “ACPS will develop modern and environmentally sustainable facilities, infrastructure, and equipment” and supports the Climate Action Plan’s transportation sector goals.

ACES, in consultation with ACPS Transportation staff, recognizes that this initiative may require upfront investments. Although electric vehicles generally have lower operating and maintenance costs, some models may carry higher purchase prices or require installation of charging infrastructure. To ensure that these costs do not disrupt existing fleet replacement cycles, ACES will collaborate with the Transportation Department to submit a budget initiative that offsets any additional vehicle purchase costs.

To proactively meet the fuel needs of this transitioning fleet, ACES further recommends funding a comprehensive EV charging solution. This includes the planning, engineering, and execution of a system capable of monitoring fleet energy metrics separately from building data. ACES recommends funding this either through a dedicated CIP request or by advising staff to evaluate available public-private partnerships.



*Left – EV fleet vehicle charging at Albemarle County Office Building*

### **Recommendation 3: Reduction of Single-Use Plastics in School Kitchens & Cafeterias**

To advance waste diversion goals and promote sustainable practices across division operations, ACES recommends that cost-effective measures be implemented to reduce the use of single-use plastics in school nutrition programs.

The use of single-use plastics in cafeterias increased substantially during the COVID-19 pandemic, and some of these temporary practices have remained in place, resulting in unnecessary waste generation. Many schools now operate lunchroom composting programs, and plastic contamination—such as utensils, wrappers, and condiment packets—poses a significant challenge. Contamination often leads to compost loads being rejected and sent to landfills, undermining the success of these programs.

Beyond environmental concerns, growing evidence shows potential health risks associated with plastics exposure, particularly for children. Microplastics have been linked to inflammation, immune dysfunction, and possible chronic health conditions, while per- and polyfluoroalkyl

substances (PFAS), known as “forever chemicals,” persist in the environment and the human body.

Operationally, single-use plastics add unnecessary costs and labor burdens. Staff must purchase, stock, and manage these items, and handle increased trash volume requiring frequent trips to dumpsters. All school waste is hauled nearly 90 miles to a landfill in Chesterfield County, increasing transportation emissions and placing environmental burdens on other communities.

Single-use plastics are derived from fossil fuels, with greenhouse gases emitted at every stage of their lifecycle—from extraction and refining to production and disposal. Reducing reliance on these materials directly supports the [Albemarle County Climate Action Plan](#), which calls for promoting waste reduction, circular economy principles, and the waste hierarchy—prioritizing prevention and reduction over disposal. Similarly, the draft [AC44 Comprehensive Plan](#) includes a community-wide zero-waste goal.

ACES notes that several peer institutions have already adopted similar commitments. The University of Virginia’s 2030 Sustainability Plan includes a goal to reduce waste generation by 70% below 2010 levels by 2030, while Fairfax County Public Schools has set a zero-waste goal by the same year. The Commonwealth of Virginia has also enacted a ban on expanded polystyrene food containers in state institutions.

Consistent with these models, ACPS can demonstrate leadership by implementing low-cost or cost-neutral measures that reduce single-use plastics in school cafeterias. Examples include:

- **Reducing plastic utensil use** by piloting washable utensils, consolidating utensils (e.g., replacing separate forks and spoons with sporks), or identifying environmentally preferable alternatives.
- **Buying in bulk** by replacing single-serving condiments (such as ketchup and salad dressing packets) with refillable squeeze bottles or pump dispensers.
- **Eliminating unnecessary packaging** such as prepackaged fruits and vegetables or plastic containers for whole fruits.
- **Encouraging share tables** to allow unopened packaged foods to be redistributed rather than discarded.
- **Improving waste stream signage and training** for staff and students to reduce contamination and support composting and recycling.

ACES recommends that the School Board and Superintendent designate staff to evaluate current practices and develop actionable steps to reduce single-use plastic waste in ACPS kitchens and cafeterias. Reducing single-use plastics represents a meaningful step toward achieving the division’s climate goals, while modeling environmental responsibility and stewardship for ACPS students and the broader community.

## **Recommendation 4: Support for State-Level Actions that Enable Onsite Renewable Energy**

Onsite renewable energy is a cornerstone of achieving ACPS's climate and sustainability goals. However, several regulatory and utility-related barriers at the state level are currently hindering the division's progress toward expanding clean, cost-effective solar generation. The Advisory Committee for Environmental Sustainability (ACES) recommends that the School Board express strong support for legislative and regulatory actions that remove these barriers and facilitate equitable access to renewable energy for public schools.

The electric utility serving most ACPS schools has taken steps that delay or limit the development of mid-sized solar projects, such as those already underway within the division. These challenges include extended delays in the interconnection approval process, the imposition of costly grid upgrade requirements, and proposals to reduce compensation for excess solar energy returned to the grid through net metering.

- **Interconnection delays:** Virginia law ([Code of Virginia §56-594](#)) requires utilities to respond to net metering applications within 60 days. Several ACPS solar projects have been waiting more than 550 days without a response, postponing operational timelines and delaying anticipated energy cost savings.
- **Excessive upgrade costs:** The utility has required ACPS to pay approximately \$2.65 million in grid upgrade costs as a condition for project interconnection—an amount that would effectively erase the financial benefits of the solar investment.
- **Reduced net metering credit:** The utility has petitioned the State Corporation Commission to significantly lower the rate paid for solar energy exported back to the grid, which would further diminish the financial viability of onsite solar projects.

ACPS staff have provided testimony to the State Corporation Commission detailing how these utility actions adversely affect both the fiscal and environmental outcomes of the division's renewable energy initiatives.

ACES respectfully requests that the School Board and Superintendent support and advocate for state-level legislative and regulatory reforms that reduce these barriers to onsite renewable energy at ACPS and other Virginia public schools. By doing so, the division can help ensure that schools retain the ability to invest in affordable, clean energy solutions that align with both the [Albemarle County Climate Action Plan](#) and the [ACPS Strategic Plan's](#) commitment to environmental stewardship and operational efficiency.

# LOOKING AHEAD

The Advisory Committee for Environmental Sustainability (ACES) appreciates the School Board's continued support in advancing policies and practices that make Albemarle County Public Schools a leader in environmental stewardship, operational efficiency, and student well-being. The recommendations presented in this report—reducing vehicle idling, transitioning to electric vehicles, minimizing single-use plastics, and supporting renewable energy—represent meaningful steps toward the division's climate and sustainability goals. Together, these actions will reduce emissions, lower costs, and model responsible practices for our students and community.

Looking ahead, ACES remains committed to supporting the School Board and Superintendent in implementing these initiatives and identifying new opportunities for continued progress. In the coming year, ACES plans to:

- Advise on the sustainable design and construction of the division's next new elementary school, ensuring that it reflects best practices in energy efficiency, resource conservation, and healthy learning environments.
- Develop a comprehensive plan for the rollout of electric vehicle charging infrastructure, including both fleet charging stations and public-facing chargers.
- Explore alternative recycling models and other waste diversion strategies to strengthen the division's circular economy efforts.
- Continue to identify and evaluate emerging technologies and operational improvements that enhance energy performance, reduce emissions, and build long-term resilience across ACPS facilities.

ACES believes that by continuing to lead with innovation, collaboration, and a shared commitment to sustainability, Albemarle County Public Schools can strengthen its operational performance while inspiring the next generation of environmental stewards.