

BREAKOUT ROOMS SESSION 1

Discussion Topics:

1. Accelerating Renewable Energy and Energy Storage
2. Transitioning to Electric Vehicles
3. Preparing Communities for Flooding
4. Reducing County Waste
5. Community Outreach and Engagement

PRINCE GEORGE'S COUNTY
DEPARTMENT OF THE ENVIRONMENT



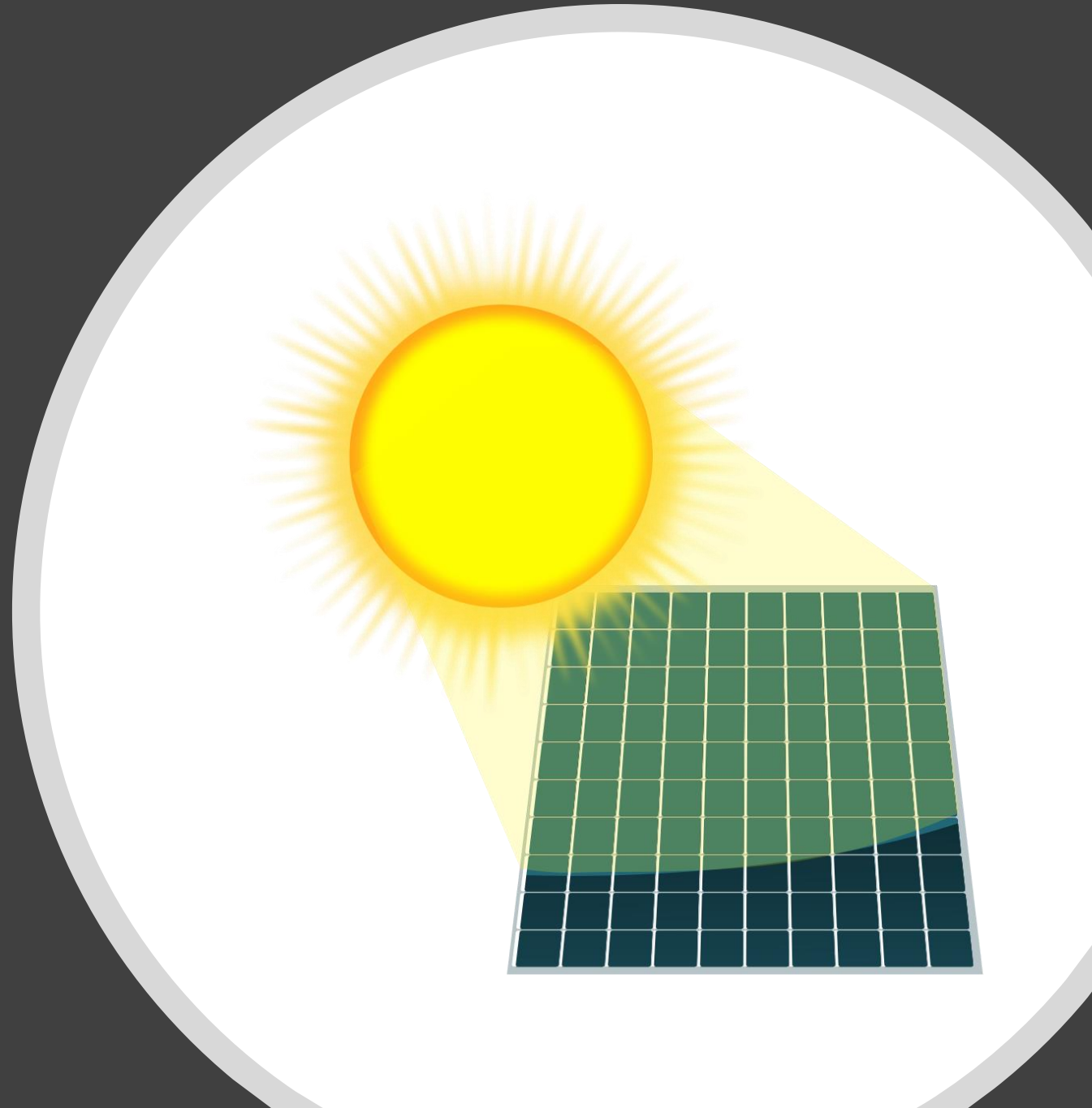
VIRTUAL COMMUNITY MEETING #2
Thursday, June 24, 2021
Session 1: Breakout Room Topics



ACCELERATING RENEWABLE ENERGY AND ENERGY STORAGE

Facilitators:

Jenny Egan, Environmental Finance Center
Deb Perry, Cadmus



Benefits of Accelerating Renewable Energy and Energy Storage

- Reduces greenhouse gas emissions.
- Reduces air pollution.
- Increases efficiencies of electric grid.

Environmental Benefit



- Keep the power on during emergencies.
- Positive impact on air quality and public health.

Human Health Benefit



- Break the cycle of energy poverty
- Homes and businesses save money on energy costs.
- Can create net increase of jobs and GDP.
- Energy storage increases the economic value of solar and wind.
- Energy storage can help businesses reduce peak demand costs.

Economic Benefit





The County has installed solar at four county facilities that produce approximately 527,000 kWh of electricity and offset over 1.3 million pounds of carbon dioxide emissions annually (fleet services rooftop solar pictured above).



Snapshot of Efforts in the County

- In 2013, the Prince George's County Council adopted the Clean Renewable Energy in Public Buildings legislation requiring new County buildings and major renovations to incorporate clean energy systems.
- County Sustainable Energy Program set a goal to meet 20% of County government buildings electricity demand with distributed, renewable energy generation by 2022.
- In 2021, the Board of Education of Prince George's County Public Schools passed a resolution committing the school district's transition to 100% clean, renewable electricity by 2030.
- FSC First Green Energy Loan Fund advances public and private investment in clean energy and other innovative green technologies in Prince George's County (up to \$250,000 for commercial buildings).
- Community solar offers opportunity for renewable access for renters and low-to-moderate income households at a discount rate.
- Maryland Energy Storage Tax Credit Program available

Change is Happening

- GHG emissions in the County have decreased 15% between 2005 and 2018.
- Rooftop solar systems in the County have increased from 50 systems in 2010 to more than 20K in 2020.
- An estimated 25% of energy consumption in the County comes from renewables as of 2018.
- UMD achieved its target to reduce carbon emissions by 50% in 2018 and procures 100% of its purchased electricity from renewable sources.
- Bowie State University has implemented several solar projects that generate between 15-20% of the campus energy needs from solar energy.



PRINCE GEORGE'S
COMMUNITY COLLEGE

**Prince George's Community College
Sustainable Energy and Workforce
Development Program**

- ASE L3 Hybrid/Electric Vehicle Specialist Licensing Preparation
- Maryland Home Improvement Contractor License Exam Preparation T
- NCCER Weatherization Technician
- NCCER Introduction to Solar Photovoltaics
- BPI Building Analyst
- BPI Envelope Professional

Sustainable Energy and Workforce Development Program Requirements

- Prince George's County Resident
- Possess a high school diploma, GED
- Relevant industry experience



Image Sources: SavWatt, Alison Beckwith, WMATA, WSSC

Preliminary Renewables Action Recommendations

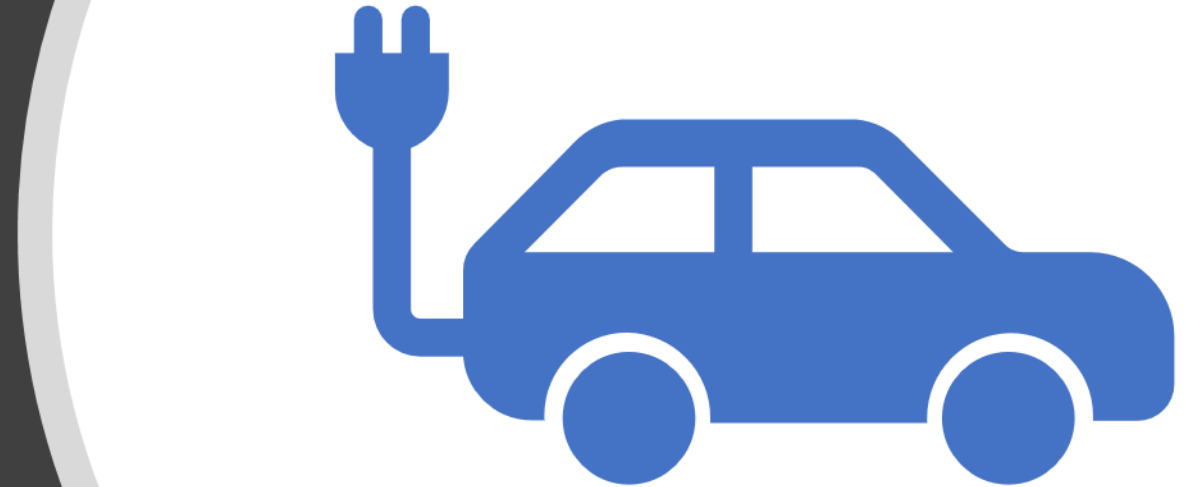
- Commitment to Renewable Energy: How community, businesses, and local government, must transition away from fossil fuel and towards renewables.
- Continue to install renewable energy systems on new and existing county-owned buildings and facilities, including schools.
- Provide and promote innovative partnerships, incentives and financing solutions for solar PV and other RE solutions on residential and commercial properties.
- Promote and support development of resilient energy systems, including energy storage paired with solar PV and deployment of microgrids to support critical infrastructure.

TRANSITIONING TO ELECTRIC VEHICLES

Promoting EV Adoption and
Deploying Charging Stations

Facilitators:

Mike Hunninghake, Environmental Finance Center
Jeff King, Metropolitan Washington Council of Governments



Benefits of Accelerated Electric Vehicle (EV) Deployment

- Reduces greenhouse gas emissions.
- Reduces smog and particulate air pollution.

Environmental Benefit



- Positive impact on air quality and public health
- Reduces rates of respiratory incidents (asthma).

Human Health Benefit



- Saves money on maintenance and fuel costs.
- Can reduce the cost of EV technology.
- Can catalyze economic growth.
- Money saved at the gas pump is spent on the other goods and services which adds stimulus to state incomes, employment, and real wages.
- Could create 2x as many new jobs as the number that will be transitioned away from in the fossil fuel vehicle market.

Economic Benefit





Approximately over the 12-year life of a typical transit bus, by replacing a single diesel bus with a battery electric bus can save over 2.5 million pounds of carbon emissions.



Snapshot of Efforts in the County

- Participant of the Maryland Energy Administration Smart Energy Communities program, the County has committed to reducing transportation petroleum consumption by **XX% by 2030.**
- Promotes Pepco and BGE rebate pilot to help offset the cost of EV Charging Station for both homes and multifamily properties.
- Evaluated County vehicle fleet through a COG electrification and efficiency improvements assessment in 2015.
- Enacted Green Fleet Policy to further promote the purchase of clean and efficient vehicles, fleet petroleum reduction plan, and completion of an EV infrastructure plan for county fleet.
- Office of Central Service(OCS) has purchased liquefied petroleum gas (LPG) powered vehicle innovative XL hybrid vehicles.
- Department of Public Works and Transportation(DPW&T) is modernizing The Bus fleet:
 - In 2021, DPW&T plans to install four electric charging stations and purchase four battery electric buses.
 - Maryland Volkswagen Mitigation Plan awarded DPW&T funding to replace six diesel trucks with electric trucks.

Change is Happening

- Global sales of electric vehicles (EVs) in 2020 increased by 39% to 3.1 million units by Feb 8, 2021 (Canalys).
- Per U.S. Department of Labor, jobs for automotive service technicians and mechanics will increase by 6% between 2016 and 2026 translating into 47,600 new jobs in addition to job openings created by retiring technicians.
- U.S. Energy and Employment Report estimated in 2019, more than 250,000 American workers employed in the manufacture, sale, repair and maintenance of electric, hybrid, and hydrogen fuel-cell vehicles.
- An \$80,000 Per Year Job of the Future: EV Charging Station Technician as middle-class jobs that don't require a college degree.



PRINCE GEORGE'S
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Prince George's Community College
Sustainable Energy and Workforce
Development Program

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- NCCER Weatherization Technician
- NCCER Introduction to Solar Photovoltaics
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Sustainable Energy and Workforce Development Program Requirements

- Prince George's County Resident
- Possess a high school diploma, GED
- Relevant industry experience



Preliminary Electric Vehicle (EV) Action Recommendations

- Support accelerated deployment of EV vehicles for the community, while also leading by example by transitioning the county fleet, buses, etc.
- Support EV charging infrastructure deployment on county properties.
- Support EV charging infrastructure deployment on new and existing multi-family housing and commercial properties.

PREPARING COMMUNITIES FOR FLOODING

Upgrading Stormwater Grey and
Green Infrastructure to Reduce
Flood Risks

Facilitators:

Stephanie P. Dalke, Environmental Finance Center
Dawn Hawkins-Nixon, Prince George's County



Benefits of Improved Flood Resiliency and Integrating Nature-based Solutions

- Protect or provide habitat
- Improve water quality
- Slow down stormwater flows
- Sequester carbon

Environmental Benefit



- Protect public safety
- Reduce exposure to mold
- Reduce stress of a flood
- Reduce heat island effect

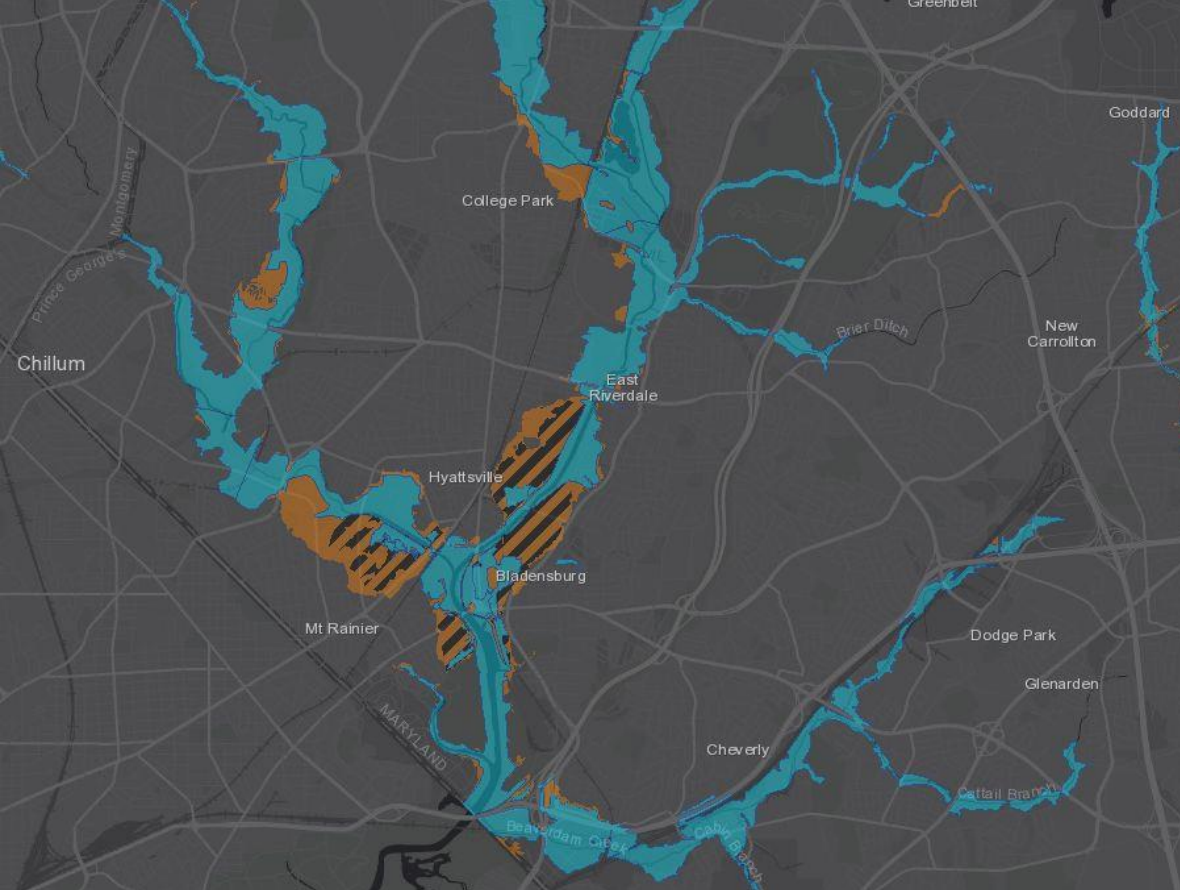
Human Health Benefit



- Save money on
 - Cleanup
 - Travel and business disruptions
 - Property damage/loss
 - Repairing or rebuilding infrastructure
- Achieve multiple benefits and cost efficiencies from green infrastructure projects
- Reduce cooling costs by increasing shade

Economic Benefit





The County participates in FEMA's Community Rating System, which recognizes a community's efforts to reduce their flood risks. Policy holders get a 10-25% discount on their federal flood insurance (NFIP) premiums.



Snapshot of Efforts in the County

- Floodplain management policies, open space ordinance
- *Hazard Mitigation Plan*
- *PLAN 2035*
- *Green Infrastructure Plan*
- County Council resolution – begin a comprehensive flooding assessment and mapping study (adopted 2021)
- Duckett Dam vulnerability assessment (2020)
- DoE Capital Improvement Program (Priority Drainage Relief Program)
- Tree ReLEAF Grant Program, Rain Check Rebate Program, Arbor Day Every Day Program, and Tree Planting Demonstrations

Change is Happening

- Green stormwater projects are popping up everywhere from home gardens to vast parking lots
- Towns are “right-sizing” culverts and upgrading stormwater infrastructure to accommodate heavier rains
- Natural flood storage, like floodplains and wetlands, is becoming more desirable than dams and levees
- Better recognition of the value of trees for slowing water down and providing shade
- Governments boosting support for resiliency, e.g.:
 - FEMA’s new Building Resilient Infrastructure and Communities (BRIC) grant program: \$500 million in 2020, \$1 billion in 2021
 - FEMA creating a new “resilience revolving loan fund” program to help communities invest in disaster prevention

FEMA: Federal Emergency Management Authority;
MEMA: Maryland Emergency Management Authority





Preliminary Flood Resilience Action Recommendations (p.1)

- Maximize the County's flood resilience and reduce flood risk by re-evaluating stormwater standards and by implementing both the County's Mid-Term and Long-term Recommendations (DPIE / DPW&T / DOE) and improve access to information on County's flood risk / mitigation programs.
- Preserve the flood retention capacity of existing floodplains. Preserve and increase, if possible, the capacity of natural areas to manage additional flooding per future climate projections.
- Assess climate impacts on all high-hazard dams, including those currently deployed for flood control.





Preliminary Flood Resilience Action Recommendations (p.2)

- Establish a County no net loss policy. Strengthen Woodland Conservation Act. Create or expand existing incentives for residents and local businesses to plant trees that expand urban tree canopy.
- Integrate green infrastructure (GI) projects into County capital improvement budgets, including the prioritization of creating additional publicly-accessible open, green spaces with potential for carbon sequestration on County properties. Prioritize nature-based solutions for carbon sequestration, flood prevention, and extreme heat mitigation by adopting and enforcing codes to require green infrastructure (GI) practices for new and existing properties.



WASTE MANAGEMENT

Enhancing and Expanding
Existing Organic Waste
Diversion Efforts

Facilitators:

Michelle Kokolis, Environmental Finance Center
Carol Barth, Prince George's County



Benefits of Increasing Organic Waste Composting

- Reduces the cost of waste disposal in government tipping fees as waste tonnage is reduced.
- Can result in a profitable byproduct that can be resold for gardening

Economic Benefit

- Positive impact on air quality near landfill
- Reduces rates of respiratory incidents (asthma).

Human Health Benefit

- Reduces greenhouse gas emissions.
- Reduces smog and particulate air pollution.
- Compost amended soil increases water retention reducing runoff
- Sequesters carbon in the soil as compost is used to amend gardens and soil

Environmental Benefit

Snapshot of Efforts in the County

- Piloted a curbside food scraps collection program from December 2017 to January 2019. Approximately 200 households from four diverse communities diverted an estimated total of 112,000 pounds of food scraps from the landfill. The program is now expanding to 3,000 households and plans county-wide deployment in the next two to three years.
- The County contracts with Maryland Environmental Services to operate the Organics Composting Facility in Upper Marlboro, MD. Yard trim (including grass clippings, leaves, brush, small branches, and Christmas trees), is collected from approximately 172,000 households in the County and turned into Leafgro®.
- Half a dozen Prince George's County municipalities are leading organic waste composting programs including backyard composting, curbside pickup, and education and outreach efforts.



Preliminary Organic Waste Action Recommendations

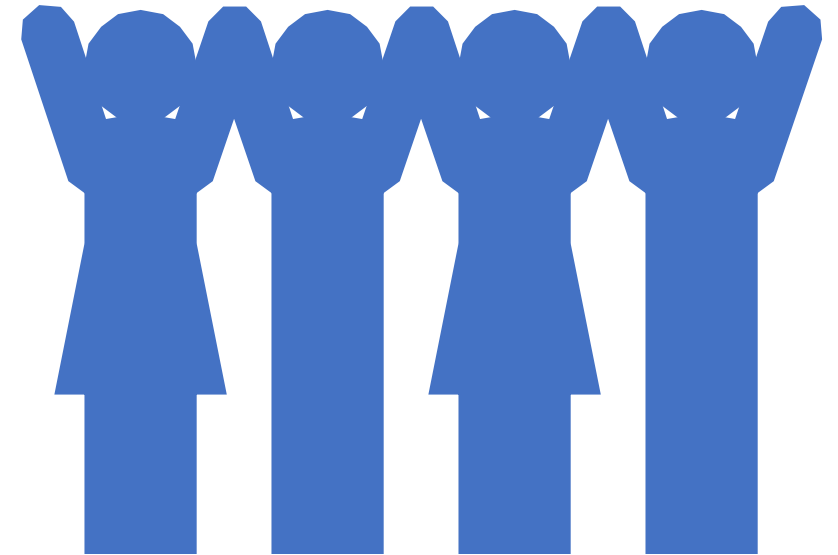
- Enhance County Waste reduction and diversion efforts. Prioritize the strategic expansion of the food scraps curbside collection program so more households and high use/waste generating businesses have access to composting. Support plastic bag ban and bottle deposit efforts



COMMUNITY OUTREACH AND ENGAGEMENT

Facilitators:

Jen Cotting, Environmental Finance Center
Maia Davis, Metropolitan Washington Council of
Governments



Benefits of Community Outreach and Engagement

- Reduces greenhouse gas emissions.
- Reduces smog and particulate air pollution.

Environmental Benefit



- Delivering equitable outcomes to underserved communities.
- Positive impact on air quality and public health

Human Health Benefit



- Break the cycle of energy poverty.
- Homes and businesses save money on energy costs.
- Increased community action can lead to increased investment in the local economy.
- Climate action benefiting low-income residents can help address economic and social disparities.

Economic Benefit





Prince George's County was awarded two Climate Leadership Awards for the County's - one in 2018 for its Sustainable Energy Program and in 2019 for its Food Composting Program.



Snapshot of Efforts in the County

- Energizing Student Potential (Energy Literacy) is the first-of-its-kind STEM educational initiative implemented in PGCPs with a specific emphasis on energy efficiency, conservation, and alternative energy.
- County Sustainable Energy Program "Energy Coach" serves as an objective and trustworthy advisor for community-based Sustainable Energy initiatives providing one-on-one consultation with residents, assists applicants with County energy grant applications, and more.
- Prince George's County Energy Resiliency Zones (ERZs), formally Transforming Neighborhood Initiatives (TNI), are identified to uplift neighborhoods that face economic, health, public safety and educational challenges. County Sustainable Energy Program offers opportunities for residents in ERCs.
- Prince George's County Clean Water Partnership builds the experience and capacity of local businesses and workforce to design, install, and maintain green infrastructure projects as well as mentorship on how to compete for stormwater contracts and subcontracts.
- The Prince George's County Environmental Justice Commission operated from 2018 – 2020 to identify priority EJ issues in the county, priority areas, specific actions, and a path forward. Priority areas include land use, health equity and environmental benefits districts.
- The Maryland EJ Screen Tool (MD-EJUST) tool allows users to explore layers of environmental justice concern, determine the overall 'EJ Score' for census tracts in the state. Stakeholders in Bladensburg and the Port Towns reviewed and helped improve the tool.

Change is Happening

- County Sustainable Energy Program has awarded **x** grants to residents and businesses in the County, **x** within Energy Resiliency Zones.
- Energizing Student Potential (Energy Literacy) initiative engaged about 5,600 PGCPs students from elementary and middle schools in its first year.
- Clean Air Partners' interactive *On the Air* education curriculum on air quality and climate issues. Every year in the County, the program trains teachers on the curriculum, engages students at 2-3 schools, 100 youth at summer camps, 1 high school science fair, and ~ 25-50 students participate in the poster and slogan contests.
- The County initiative a curbside collection pilot of food scraps in 4 diverse communities from December 2017 to January 2019 with approximately 200 households from four diverse communities. An estimated total of 112,000 pounds or 56 tons of food scraps were collected and diverted from the landfill.



Prince George's County Solar Co-Op Community Event

Solar co-ops educate citizens about how to go solar with neighbors at a discount. Two solar co-ops rounds in the County resulted in more than 230 participants learning about solar, 65 solar installations that added more than 490 kW of solar capacity, \$1.39 million invested in solar, which is estimated to save more than \$2.9 million in energy savings over the 25-year life of the system.

The first Capital Area Solar Co-op is currently open and available to County residents.



Source: Frederick County



Preliminary Education and Outreach Action Recommendations

- Transparency by tracking and measuring Climate Action Impacts. Establish indicators and systems of accountability to monitor progress on the recommendations of the CAP. Update the Budget, Procurement, and Capital Improvement Plan Process to reflect climate mitigation and adaptation goals.
- Support and engage the public regarding the impacts of climate risks by providing direct assistance (technical and financial) to potentially vulnerable populations.
- Provide data, information, and resources to underserved communities and engage community members in citizen science so they are a part of developing relevant data for their community.



Apply to be a County Climate Action Resident Expert

- <https://forms.gle/z92cx7LLrYTmNLN17>

Visit the DMV Climate Partners Website

- <https://climatepartners.org>

Learn More About Upcoming Meetings

- mypgc.us/climateactionplan

Explore the County CAP Virtual House

- <https://bit.ly/2S7PgEQ>

Provide Comments and Feedback

- <https://bit.ly/3vBKqNJ>

Stay Engaged

