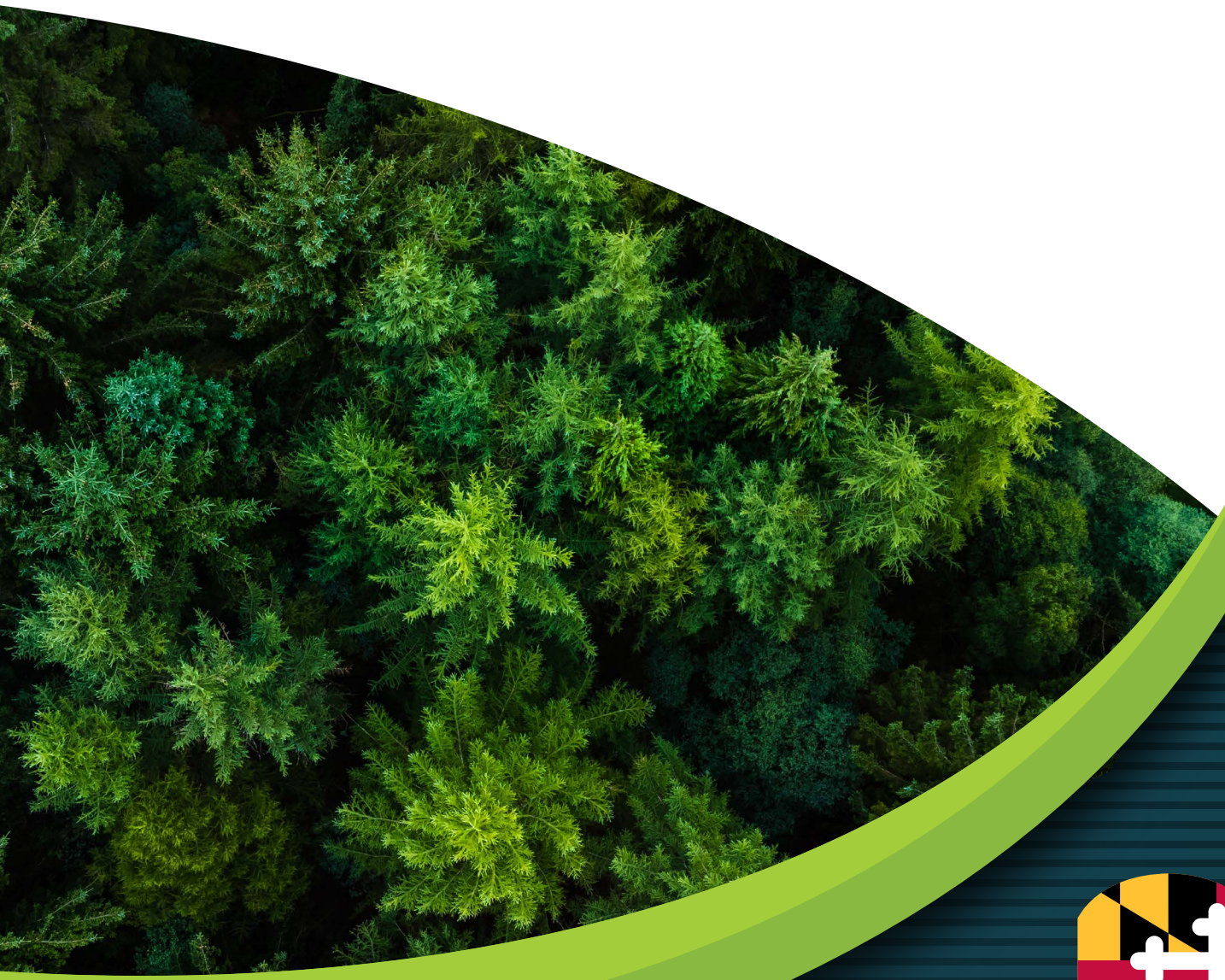
2024
Maryland Green Purchasing Committee Annual Report

Maryland Green Purchasing



Maryland
DEPARTMENT OF
GENERAL SERVICES

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A Message from the Secretary

Dear Members of the Legislature:

I am honored to present the FY 2024 Annual Report of the Maryland Green Purchasing Committee. As the Chair and Staff of the Green Purchasing Committee, the Department of General Services (DGS) leads environmentally preferable purchasing activities for the state. This important statewide program plays a crucial role in meeting the Moore/Miller Administration's goals to combat climate change, protect the environment, and be the greenest state in the country by leveraging the purchasing power of Maryland's state government to minimize our impact on the environment, public health and the climate.

This year, the program continued to demonstrate the benefits of green procurement for all Marylanders. I am happy to report that as a result of our efforts, the Committee documented:

- $100, 811, 525 in environmentally preferable purchases by state agencies
- 149,752 tons of greenhouse gas reductions (CO_2e)
- $7,102,049 in cost savings

The Green Purchasing Committee remains committed to our work to make our communities greener and cleaner for all. Thank you for reading.

Atif Chaudhry
Secretary

FY 2024 Impact Report

In FY 2024 the State of Maryland procured $100,811,525 in environmentally preferable products and services, avoiding harmful impacts of conventional purchases. Those procurements translate into tangible benefits to the citizens of Maryland.

$7,102,049 Saved

**149,752 Tons of CO_2e Avoided =
30,257 Cars Removed from the Road**

**87 GWh of Electricity Saved =
7,320 Homes' Annual Energy Use**

**28,031 Tons of Material Conserved =
701 Tractor Trailers' Weight**

**28,800,804 Gallons of Water Conserved =
44 Olympic Swimming Pools**

**1,454 Tons of Waste Avoided =
753 Homes' Annual Waste**

286 Tons of Pollution Reduced

Introduction

Environmentally preferable purchasing, also called "Green Purchasing," is the procurement or acquisition of goods and services that have a lesser or reduced effect on human health and the environment when compared with competing goods or services that serve the same purpose.

The Green Maryland Act of 2010 established Maryland's Green Purchasing Program as well as the Maryland Green Purchasing Committee to administer the program. The Committee is composed of 12 statutory agency members and is chaired and staffed by the Department of General Services.

The Committee holds regular quarterly meetings which are open to the public in accordance with the Maryland Open Meetings Act, as well as several working meetings throughout the year. A list of all Committee Designees and Participants is included in Appendix B.

The Maryland Green Purchasing Committee advances environmentally preferable (or green) purchasing through training, outreach, coordination with other state entities, and by developing and publishing environmentally preferable specifications for agencies to use in their procurements.

Maryland's program is strengthened by statutory requirements for the State to buy green:

> All procurement agencies shall purchase environmentally preferable products and services unless purchasing environmentally preferable products and services would limit or supersede any requirements under any provision of law or result in the purchase of products and services that:
>
> 1. Do not perform adequately for the intended use;
> 2. Exclude adequate competition; or
> 3. Are not available at a reasonable price in a reasonable period of time.[1]

The Committee is required to report annually to the Legislature. This report allows us to document the progress of Maryland's Green Purchasing Program.

[1] State Finance & Procurement Article § 14-410(f)

Maryland's FY 2024 Green Spend

In FY 2024, Maryland spent $100.8 million on environmentally preferable products and services. Maryland's green spend consists of green spend off of statewide contracts, agency independent green purchases, renewable energy, and electric vehicles (EVs) and charging infrastructure. The Green Purchasing Committee (GPC) tracks that spend from data submitted by vendor reports for key statewide contracts as well as data submitted by agencies.

Spend Type	Amount
Statewide Contracts	$50,959,117
Agency Green Spend	$27,609,079
Renewable Energy	$19,323,160
Electric and Hybrid Vehicles	$920,169
EV Charging Infrastructure	$2,000,000
Total	**$100,811,525**

Green Spend on Statewide Commodity Contracts

The Green Purchasing Program tracks spend on statewide contracts in key high impact categories. These contracts are managed by the DGS Office of State Procurement and open for all state purchasing entities to utilize. Purchases made through statewide contracts make up a significant portion of Maryland's green spending. In FY 2024, the State of Maryland spent $51 million on green products and services offered on statewide contracts utilized by State agencies, higher education institutions, and local governments across Maryland.

Statewide Contract Spend

Vendor	Product Category						Green Spend	Total Spend	Percent Green
Acme			✓				$98,952	$260,986	37.91%
AJ Stationers			✓	✓		✓	$148,637	$631,878	23.52%
ATS		✓					$17,548,237	$28,864,797	60.79%
Blind Industries (BISM)				✓		✓	$10,775,669	$15,294,873	70.45%
Canon		✓					$6,727,027	$7,390,927	91.02%
Cartridge Plus						✓	$37,240	$63,913	58.27%
CDW-G		✓					$919	$919	99.98%
Daly		✓					$2,496,379	$4,265,072	58.53%
ELDSI		✓					$22,926	$370,634	6.19%
Fastenal	✓			✓			$37,440	$1,166,706	3.21%
FPC Holdings			✓				$875,700	$3,275,864	26.73%
Grainger	✓	✓		✓	✓	✓	$497,104	$1,164,647	42.68%
Graybar					✓		$2,710,174	$3,252,138	83.34%
MCE						✓	$3,154,278	$7,693,736	41.00%
RGH Enterprises Inc.		✓	✓	✓		✓	$835,472	$2,957,171	28.25%
Ricoh		✓					$252,296	$282,917	89.18%
Rudolph's Office and Computer	✓	✓	✓	✓	✓	✓	$4,000,015	$11,203,621	35.70%
Sharp		✓					$710,699	$890,022	79.85%
Toshiba		✓					$6,000	$17,182	34.92%
Xerox		✓					$23,952	$24,157	99.15%
Total							**$50,959,117**	**$89,072,159**	**57.21%**

Maryland utilizes preferred providers including Blind Industries and Services of Maryland (BISM) for items such as office supplies and janitorial supplies and Maryland Correctional Enterprises (MCE) for furniture, signage and more.

Green Spend on Agency Commodity Contracts

While most agencies use statewide contracts to purchase commodities, which are tracked by the Green Purchasing Committee, agencies may choose to enter into their own agreements with vendors. These agreements, reported here as agency contracts, offer the buying agency greater flexibility in their purchases. For instance, specialized agencies like the Department of Health need to procure medical goods that other agencies do not require. Agencies may also choose to use their purchase cards (i.e., credit cards) for small purchases made outside of contracts altogether; this may occur if a product is needed urgently and there is not enough time to create and execute a new procurement contract.

Agency Level Contract Spend

	Product Category							
Vendor							**Other**	**Green Spend**
Aviation Administration	✓			✓	✓			$75,823
Environment	✓	✓		✓				$116,059
Housing & Community Development		✓						$14,613,491
Military		✓						$32,745
Motor Vehicle Administration		✓			✓			$814,099
Port Authority	✓	✓						$139,823
Public Safety & Correctional Services			✓					$237,509
Stadium Authority		✓			✓			$40,752
State Board of Elections		✓						$69,179
State Department of Assessments & Taxation				✓		✓		$1,196
Towson University	✓	✓	✓	✓				$726,189
University of Baltimore		✓		✓	✓	✓	✓	$16,896
University of Maryland, Baltimore		✓		✓	✓		✓	$10,288,228
University of Maryland, College Park		✓		✓		✓		$423,269
University of Maryland, Eastern Shore					✓			$4,890
University of Maryland Global Campus				✓	✓		✓	$8,929
Total								**$ 27,609,079**

To better understand these types of purchases and their environmental impact, the Green Purchasing Committee requests that agencies submit green purchasing reports on any environmentally preferable purchases made on agency contracts or through their purchase cards. In FY 2024, 16 agencies provided detailed green purchasing reports identifying a total agency green spend of $27.6 million. One agency, The Department of Housing & Community Development, used a federal grant to purchase over $14 million in green IT products. **For all state agency green spend, please see page 27.**

Renewable Energy

The State purchases renewable power from two utility scale wind installations and one solar installation, utilizing three 20-year Power Purchase Agreements (PPAs): Mount St. Mary's Solar; Pinnacle Wind; and Roth Rock Wind. In FY 2024, the State of Maryland spent $19,323,160 on 230,397 MWh of renewable energy which accounted for approximately 15% of the electricity for State operations.

Project	Total Generation (kWh)	Total Cost ($)
Mount St. Mary's - Solar	19,120,180	$4,254,241
Pinnacle - Wind	188,486,387	$12,776,977
Roth Rock - Wind	22,789,901	$2,291,943
Total	**230,396,468**	**$19,323,160**

Passed during the 2023 session of the Maryland General Assembly and signed into law, Senate Bill 781 (POWER Act) Section 7-704.4 of the Public Utilities Article, amended by HB 1296 (2024), requires DGS to issue competitive sealed procurement solicitations in 2024 and 2025 to enter into a minimum twentyyear PPA to procure offshore wind energy and associated renewable energy credits to help the state meet its offshore wind energy goal of 8,500 MWs. Excess energy shall be sold into PJM (the independent system operator for the regional transmission grid) or to creditworthy counterparties. DGS is currently negotiating with concerned parties on contractual arrangements. Electric Vehicles and Charging Stations In FY 2024, the state replaced 20 internal combustion engine vehicles with battery electric vehicles that have no tailpipe emissions. These additions bring the State's total electric fleet vehicle total to 166 battery electric vehicles, 55 plug-in hybrids, and 129 hybrids. It is anticipated that EV numbers will continue to grow in FY 2025 to meet the requirements of Climate Solutions Now Act. DGS, responsible for installing EV charging to support the state's electric fleet, encumbered $2 Million for charging infrastructure. Vehicle and charging station procurements are supported by Strategic Energy Investment Funds (SEIF), through the Maryland Energy Administration.

Electric Vehicles and Charging Stations

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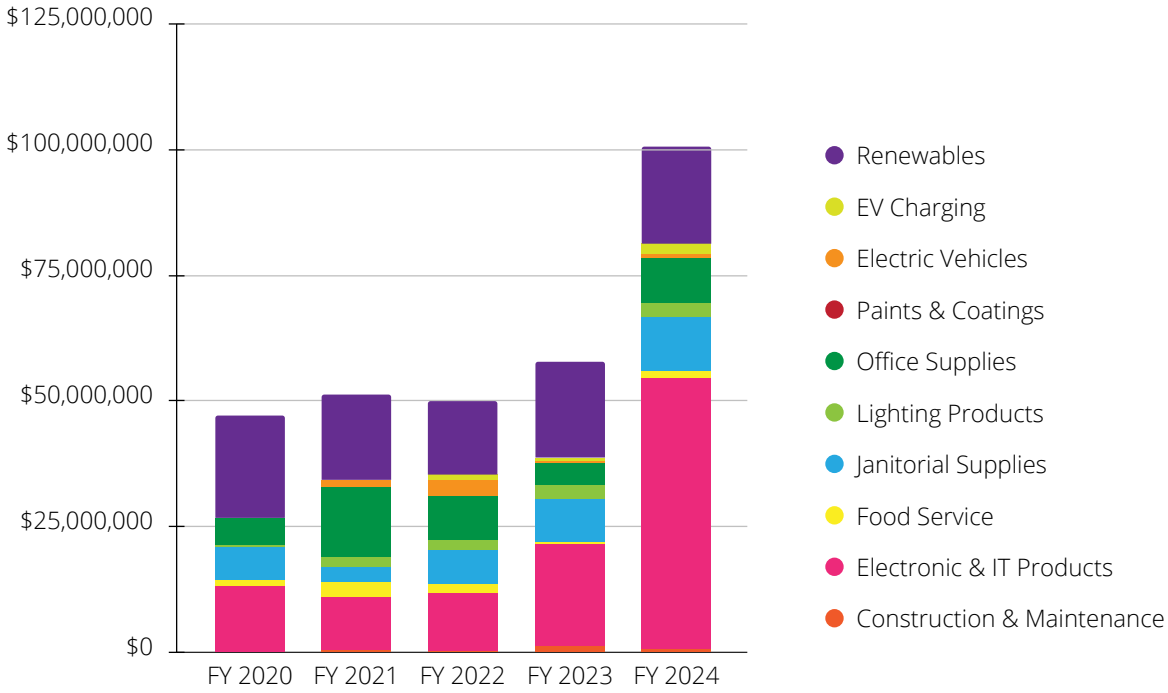
FY 2024 Green Spend by Commodity

- Paints & Coatings - $5,494 (0.01%)
- Construction & Maintenance - $561,550 (0.56%0
- Electric Vehicles - $920,169 (0.91%)
- Food Service - 1,420,337 (1.41%)
- EV Charging - $2,000,000 (1.99%)
- Lighting Products - $2,873,141 (2.86%)
- Office Supplies - $8,734,273 (8.68%)
- Janitorial Supplies - $10,637, 081 (10.57%)
- Renewables - $19,323,160 (19.21%)
- Electronic & IT Products - $54,125,069 (53.80%)

FY 2024 Green Spend Over Time



Benefit Calculations for FY 2024 Green Spend

Green Purchasing activities provide benefits for the health and wellbeing of the planet and all living things. Below is a snapshot of health, environmental, and cost benefits of the state's FY 2024 green spend.

	Emissions Avoided/ Resources Savings	Pollutants & Toxic Materials Avoidance	Cost Savings
Electric Vehicles	750 tons of CO_2e	.01 tons of SO2 .49 tons of NOX .41 tons of VOCs .02 tons of PM2.5	Cost savings expected in the future
Green Electronics & IT	66 GWh of electricity 13,769 tons of CO_2e 20,960 tons of material 8,173,950 gallons of water	8 tons of toxic substances 180,338 lbs. of hazardous waste	$5,914,588
High Yield & Remanufactured Ink Cartridges	31 tons of CO_2e 70 tons of material	Unable to be estimated at this time	$142,955
LED Lighting	8.7 GWh of Electricity	2.5 tons of SO2 2.2 tons of NOX .4 tons of PM2.5	$1,014,416
Recycled Paper	5 GWh of Electricity 10,313 tons of CO_2e 20,626,854 gallons of Water	57.65 tons of SO2 10.14 tons of PM2.5 .52 ton of HAPs	
Recycled Products (Non-Paper)	7 GWh of electricity 728 tons of CO_2e 561 tons of material	Unable to be estimated at this time	
Renewable Energy	118,280 tons of CO_2e	49 tons of SO2 43 tons of NOX 2 tons of VOCs 7 tons of PM2.5	

Program Activities

The Green Purchasing Committee identified seven goals for FY 2024 and carried out numerous activities in support of those goals, as described below. The Green Purchasing Committee held numerous training and learning events for

GOAL 1 Establish a robust library of specifications

In FY 2024, the GPC approved and published 11 specifications, covering 83 product types.

- Aggregates
- Compost
- Electronics & IT (updated)
- Food Service Supplies (updated)
- Integrated Pest Management - Indoor (updated)
- Integrated Pest Management - Outdoor (updated)
- Landscaping Supplies (updated)
- Laundry Services
- Mulch
- Sealants
- Soil Amendments

In response to HB586, the GPC developed the Aggregates, Compost, Mulch and Soil Amendments specifications through a collaborative process with representatives from several state agencies, University of Maryland, College Park, Howard County Government, and private industry participants. Minimum requirements were set that correspond to the applicable processes that are managed by both the Department of Agriculture and the Department of the Environment. After these specifications were published, the Landscaping Supplies specification was updated to reference the individual product specifications, as applicable.

The GPC developed the Sealants specification to promote the sustainable purchasing of materials for roadway and building construction & maintenance projects at state-owned facilities. It covers various products, including asphalt emulsions, tack coats, asphalt additives, silicone sealants, acrylic sealants, and more. Requirements in this specification include a maximum limit for polycyclic aromatic hydrocarbons (PAH), as well as setting testing requirements and methods for sealants.

GOAL 2 Communicate the benefits of green purchasing

For the fifth year in a row, the state of Maryland was recognized with an EPEAT Purchaser Award from the Global Electronics Council. The award recognizes Maryland's procurement of IT products with the EPEAT ecolabel, which addresses sustainability across the electronics life cycle, from materials extraction to end-of-life: Climate Change, Chemicals of Concern, Circularity and Sustainable Use of Resources, and Responsible Sourcing. The Global Electronics Council is a non-profit organization dedicated to the design, manufacture, and procurement of sustainable IT products.

GOAL 3 Continue to provide training and learning opportunities

The Green Purchasing Committee held numerous training and learning events for state employees in FY 2024. Green Purchasing staff continue to serve as instructors for Green Purchasing foundations training, which is a mandatory component of the **Certified Maryland Procurement Officer** program offered through Maryland Procurement Academy. In FY 2024, 106 state procurement professionals received green purchasing training through the CMPO program. This training covers the fundamentals of green purchasing including green purchasing requirements in Maryland and GPC issued specifications.

The **Maryland Green Purchasing Specialist** program was offered for a third year in a row, offering state procurement officers across state agencies the opportunity to become certified green purchasing subject matter experts. In September 2024, 23 procurement officers graduated with their Green Purchasing Specialist certification, joining the 40 who earned theirs in previous classes. To earn the certification, procurement staff had to have already earned their CMPO designation, as well as complete 13.5 hours of live training and pass an exam. Topics included climate literacy, ecolabels and certifications, lifecycle considerations, and practicing how to green sample contracts. In July 2023, the Maryland Bioenergy Center hosted the Green Purchasing Committee for an organics recycling facility tour. GPC members were able to observe the facility's recycling operations which uses anaerobic digestion to recycle 110,000 tons of organics annually.

DGS and the Maryland EV Ambassadors hosted a Maryland Drives Electric event for **National Drive Electric Week**. The event included an opportunity for individuals to learn about Maryland's state fleet transition to electric vehicles and the installation of charging stations across the state. Participants had the opportunity to view a BGE charging station demonstration, test drive an EV, talk to EV owners about their experiences, and see over 8 different EV models, including the first Capitol Police electric patrol vehicle.

DGS and the Green Purchasing Committee celebrated **Earth Day** with an employee event. The event included an EV charging station demonstration, vendor booths featuring green products and organizations, EV trivia and games, and several of the state's EV fleet. Attendees were able to test drive passenger EVs as well as try out micro-mobility solutions such as e-bikes and scooters.

In FY24, the GPC started to offer in-depth specification training. The first webinar took place in March 2024, and focused on the Landscaping Supplies specification. These webinars provide an opportunity for users to learn how to implement the requirements listed in the GPC specifications and provide an opportunity to have questions answered. Additional training and speaking engagements included:

- Doing Green Business with Maryland presentation at the **Maryland Business Opportunities Summit**
- Sustainability and Procurement presentation at the **Maryland Procurement Forum**.
- Presented on Maryland's green purchasing program at a **Lunch and Learn** event hostedby the Charles County Health Department, a **Comptrollers Climate Advisory Council** meeting, and a Green Purchasing 101 designed for the Howard County Public Schools system.

GOAL 4 Recognize agencies for their green purchasing successes

Recognizing state agencies for their success helps to reward high performers, incentivize further achievements, and promote agencies as models and resources for others to learn from. In order to recognize the green purchasing efforts of state agencies, the GPC highlighted agencies in the November, February, and May Green Purchasing quarterly meeting for data compliance and for their green spend percentages. Agencies were also recognized via the GPC's quarterly e-newsletter. All CMPO Green Purchasing Specialists are publicly listed on DGS' website. This brings attention to their important achievement, as well as communicates the subject matter experts that can be a resource to other agency staff.

GOAL 5 Simplify the green purchasing process for procurement staff & purchasers

The best way to ensure that green procurement becomes the default procurement activity is to simplify and automate the process whenever possible. The GPC worked with the Office of State Procurement to ensure that green purchasing was represented in their online resources for procurement officers, including guidelines for the e-procurement system, eMMA. A guidance document was developed to help procurement officers know when to mark something as green in eMMA.

The GPC continues to improve the way that specifications are published to be easily identified by agency procurement staff. An updated specification template was developed during FY24 to help make specifications easier to use for program staff and procurement officers.

During FY24 the GPC participated in the sourcing for the NASPO ValuePoint Electric Vehicle Charging Station portfolio. This nation-wide procurement was led by Maryland DGS, to offer public entities across the nation options for EV charging infrastructure to meet the rising demand of green vehicle/environmental initiatives. 13 suppliers executed Master Agreements, which are effective from June 1, 2024, through May 31, 2027, with a possible renewal limit through May 31, 2029. This master agreement will make it easier for procurement staff in Maryland, and around the country, to purchase EV charging equipment.

Green Purchasing staff also provided support to procurement officers by meeting individually upon request in order to explain or answer questions related to green purchasing specifications and requirements.

GOAL 6 Promote the development of recycled content markets

In FY 2024, Maryland prioritized the purchase of products containing recycled material to support recycling markets. Recycled content products play an important role in the diversion of waste from landfills and help conserve our natural resources. By choosing recycled content over virgin material, Maryland can ensure that its demand for new products is aligned with the State's vision for a sustainable and healthy future for all.

The GPC developed and published specifications which include minimum recycled content requirements for commodities:

- Landscaping supplies: Recycled content requirements for landscaping timbers, fencing and decking, water hoses, and park benches.

The GPC also continues to provide guidance on the purchasing of office supplies and promotional materials, including guidance for recycled content in paper marketing materials, water bottles, and reusable tote bags.

DGS, in its role as GPC Chair, served as a Member on MDE's Task Force for the Development of Recycling Markets in accordance with the 2021 House Bill 164 and is working closely with MDE on opportunities to promote recycled content markets.

DGS also continues to manage the State's electronic waste (e-waste) through responsible recycling. It is vital to a successful circular economy to recover materials that can be remanufactured or recycled into new products, reducing the need for virgin material. Because electronics are manufactured with materials that are both valuable and potentially hazardous to the environment, their proper disposal is critical. When electronic waste (e-waste) is improperly managed, there can be consequences for the local environment and the public health of those managing the e-waste – especially if proper safety protocols are not followed. To address these concerns, Maryland requires that e-waste be processed by a certified e- Stewards or R2 recycler.

GOAL 7 Continue to engage and support vendors to increase awareness and compliance

A strong collaborative partnership between the GPC and the vendors who serve state agencies is critical to advancing green purchasing in Maryland. Green Purchasing staff regularly meets with vendors to provide one on one coaching on green purchasing requirements and opportunities for vendors to green their practices.

In FY 2024, the GPC worked with the following statewide vendors:

- Cintas
- Maryland Correctional Enterprises
- Dell
- Fastenal
- Grainger

Green Purchasing staff also met with vendors looking to do business with the state to provide guidance on green requirements and how they may be incorporated into contracts. Staff attended a Ready, Set, Grow event that was hosted by the Governor's Office of Small, Minority, and Women Business Affairs to meet small and minority businesses.

Promoting Re-Use

DGS manages the acquisition and utilization of surplus property through two statewide programs: the State Surplus Property Program and the Federal Surplus Property Program. These programs are excellent examples of the circular economy in action and support Maryland's role as a responsible steward of both taxpayer dollars and our natural environment.

When Maryland reduces the number of new items purchased, keeps items in use or extends their life, and responsibly manages the end life of the products consumed, waste is minimized, and our environmental footprint shrinks. Extending the useful life of products not only eases unnecessary burdens on the State budget, but also diverts waste from Maryland's landfills. By avoiding both the cost of a purchase as well as disposal costs, Maryland can shift those dollars to serve other purposes.

State Surplus Property Program

The State Surplus Property Program is responsible for the management of excess and unneeded Stateowned property. The DGS Inventory Standards and Support Services Division determines the appropriate disposition method and ensures useful items are reused whenever possible.

In FY 2024, **over $1 million** worth of property was reassigned to other state agencies and $18 million was donated to local jurisdictions and non-profit organizations who could give the items a second life. Most items were disposed of through online auction, thereby lengthening the lifespan of the product, while also bringing funds back to the state. The division sold over $93 million worth of property through online auctions, including 811 state vehicles and pieces of equipment.

Federal Surplus Property Program

The Federal Surplus Property Program, administered by DGS, ensures that federal property can be reutilized by state, local and non-profit organizations. Through this program, the state acquires furniture, electronics, vehicles, and other tools, machinery, and equipment no longer needed by the Federal Government. This property is then distributed to state agencies, local governments, and other organizations within Maryland.

In FY 2024, the program managed the distribution of property valued at $13.3 million, which resulted in savings by reducing the need to buy new products while at the same time keeping these products out of the landfill.

FY 24 Federal Surplus Property Donations (July 2023 – June 2024)		
Organization Type	**Items Donated**	**Donation Value**
Small Business (8a)	Furniture, Equipment, Vehicle	$190,236.65
MD DGS	Office Furniture, Refrigerators	$293,118.00
MD State Agencies	Furniture, Equipment, Trailers, Vehicle, Aircraft	$251,437.12
Nonprofit Organizations	Medical & Surgical Supplies, Equipment, Furniture, Food, Baby Supplies, Computers, Tablets, Printers, Phones, Van, Animal Trap Cages, Truck, Trailer, Forklift, Passenger Motors, Cleaning Supplies, RV, Stationery, Storage Container, Utensils, Lawn Mowers	$12,196,698.89
Volunteer Fire Departments	Calibrator, Multimeters, Power Supplies, Digital Solder Station, Milling Machine, TVs, Tools, Drill Press	$21,228.96
Veteran-Owned Small Business (VOSB)	Printers, Pelican Cases, Equipment, Laptop Cases, Computers, Phones, Stationery, Passenger Vehicle	$89,929.47
Total		**$13,282,056.86**

Measuring Success

The GPC uses Key Performance Indicators (KPIs) based on the UN's Sustainable Development Goals to evaluate the success of our program.

	FY 2024	FY 2023	UN SDGs
Program Focused			
Contract Integration			
Specifications Approved and Published (No.)	11	7	
Contract Solicitations Greened (No.)	9	11	
Training			
Vendor Outreach and Training (Hours)	26	10	
Agency Outreach and Training (Hours)	40	32	
Procurement Officers Trained (No.)	106	114	
Communication & Outreach			
GPC Website Visits (No.)	-	2,041	
Newsletter Engagement Rate	51%	53%	
Newsletter Subscriptions (New FY-to-Date)	107	140	
Leadership & Recognition			
Awards Received (No.)	1	1	
Partnerships Developed (No.)	1	1	
Product Focused			
Financial			
Cost Savings (USD)	$7,102,049	$5,114,246	
Total Green Spend (USD)	$100,811,525	$57,766,400	
Energy			
Electricity Savings (MWh)	86,966	58,202	
Renewable Energy Purchased (MWh)	230,397	224,041	

	FY 2024	FY 2023	UN SDGs
Product Focused			
Emissions			
GHG Emissions Reductions (Tons)	149,752	155,531	3 GOOD HEALTH AND WELL-BEING; 13 CLIMATE ACTION
EV Projects Completed (No. of Ports)	63	116	
Electric vehicles Purchased (No.)	20	10	
Water			
Water Saved (Gallons)	28,800,804	15,463,438	6 CLEAN WATER AND SANITATION
Natural Resources			
Material Conservation (Tons)	28,031	14,667	11 SUSTAINABLE CITIES AND COMMUNITIES; 12 RESPONSIBLE CONSUMPTION AND PRODUCTION; 15 LIFE ON LAND
State Surplus Property Program (USD)	~$1,000,000	~$2,000,000	
Pollution			
Hazardous Air Pollutant Reduction (Tons)	0.52	0.52	3 GOOD HEALTH AND WELL-BEING; 15 LIFE ON LAND
Other Air Pollutants (Tons)	286	221	
Waste			
Municipal Solid Waste Reduction (Tons)	$7,102,049	$5,114,246	3 GOOD HEALTH AND WELL-BEING; 13 CLIMATE ACTION; 15 LIFE ON LAND
Hazardous Solid Waste Reduction (Tons)	$100,811,525	$57,766,400	

Looking Ahead

The Maryland Green Purchasing Program looks forward to future growth while continuing to pursue established goals:

1. Continue building out a robust library of specifications
2. Communicate the benefits of green purchasing
3. Expand training and learning opportunities
4. Recognize agencies for their green purchasing successes
5. Simplify the green purchasing process for procurement staff and purchasers
6. Promote the development of recycled content markets
7. Continue to engage and support vendors to increase awareness and compliance

Appendices

A.Reporting Methodology

Standards for Environmentally Preferable Products

The Green Purchasing Committee utilized standardized vendor reporting templates, created for Maryland by RPN, to collect data quarterly from targeted vendors with statewide contracts. For the purposes of reporting, the Maryland Green Purchasing Committee uses a strict set of criteria for products to be counted as green and included in green spend figures. All tonnage values in this report are in U.S. Short Tons. All values are rounded to the nearest whole number.

Benefits Calculation Methodology

1. Benefits Equivalencies

Equivalency calculations for energy savings and greenhouse gas reductions were made using the EPA's Greenhouse Gas Equivalencies Calculator. Additional assumptions for equivalencies are based off of EPEAT benefit calculators and are as follows:

- Annual Municipal Solid Waste estimate is 4,100 lbs. per household per year.[2]
- Olympic Sized Swimming Pool holds 660,430 gallons of water.[3]
- 18-wheeler (tractor trailer) weighs 80,000 lbs.[4]

2. LED Lighting

By choosing LEDs instead of incandescent, halogen, fluorescent and high-intensity discharge (HID) lighting products, the State substantially lowered its electricity bills, reduced its greenhouse gas (GHG) emissions, and protected the health of its workers and the environment by preventing exposure to toxic mercury. Environmental and cost benefits have been estimated for LED lighting by determining lamp wattage, wattage of CFL being replaced (if unable to be identified, 50% energy savings is assumed), and the associated wattage savings. The value for total wattage saved was then multiplied by the State's cost of electricity per kWh to determine total cost savings. Additional benefits from the purchase of LED luminaires are anticipated (e.g., reduction in mercury exposure) but were unable to be quantified at this time. Benefits were calculated for 7 years. However, since LEDs typically last 5-10 years, the benefits provided may only represent a fraction of total energy and cost savings.

3. Renewable Energy

By purchasing renewable energy, the State of Maryland was able to lower its CO_2 emissions and other pollutants. Benefit calculations were made using EPA's Avoided Emissions and Generation Tool (AVERT).

4. Zero Emission Vehicles (ZEVs)

The procurement of ZEVs lowers the State's carbon footprint by reducing tailpipe emissions. Benefit calculations were made using Maryland Department of the Environment's benefit analysis.

[2] EPA, Advancing Sustainable Materials Management: 2014 Tables and Figures.
https://www.epa.gov/sites/production/files/2016-11/documents/2014_smm_tablesfigures_508.pdf
U.S. Census Bureau, America's Families and Living Arrangement: 2016: Average Number of People per Household Table AVG1.
https://www.census.gov/data/tables/2016/demo/families/cps-2016.html

[3] Patagonia Alliance, How Much Water Does an Olympic Sized Swimming Pool Hold?
http://www.patagoniaalliance.org/wp-content/uploads/2014/08/How-much-water-does-an-Olympic-sizedswimming-pool-hold.pdf

[4] U.S. Department of Transportation, Compilation of Existing State Truck Size and Weight Limit Laws Report to Congress.
https://ops.fhwa.dot.gov/freight/policy/rpt_congress/truck_sw_laws/index.htm

5. High Yield + Remanufactured Cartridges

High yield and remanufactured ink and toner Cartridges provide the dual benefit of greenhouse gas (GHG) reductions and the conservation of primary resources. Estimates for GHG reduction and resource conservation were sourced from the Centre for Remanufacturing and Reuse's study The Carbon Footprint of Remanufactured versus New Mono-Toner Cartridges[5] and a Fraunhofer Institute for Environmental, Safety and Energy Technology UMSICHT study[6] on the reuse of toner cartridges. High yield cartridges manufactured by HP typically provide a page yield between 1.8 – 2.5x a conventional cartridge; HP is the primary manufacturer of high yield cartridges purchased by the state of Maryland. For these benefit calculations, a value of 2x was used when comparing high yield and conventional cartridges. By doing so, we can assume that the purchase of a single high yield cartridge provided a GHG and resource savings of one standard yield cartridge. The benefits of purchasing a remanufactured high yield cartridge were calculated by summing the benefits provided by purchasing a standard yield remanufactured cartridge and a high yield cartridge. Cost savings were estimated at a conservative rate of 15% for high yield products, 30% for remanufactured products, and 45% for remanufactured high yield products.

6. Electronics & IT

The State of Maryland considers IT to be green if servers are certified EPEAT Bronze and if computers and displays, imaging equipment, televisions, and mobile phones are EPEAT certified Silver or Gold. A lifecycle approach is used to estimate the benefits of purchasing and using EPEAT products compared to non-EPEAT products. The analysis captures environmental impacts associated with raw material extraction, component, and product manufacturing and energy consumed during product use. These benefit calculations were made using the Global Electronic Council's EPEAT Benefits Calculators for imaging equipment, servers, and computers and displays.

7. Recycled Paper Products

Maryland was able to successfully calculate the benefits associated with buying recycled paper in different subcategories: coated freesheet, corrugated container, linerboard, paperboard (coated unbleached kraft and solid bleached sulfate), tissue, uncoated freesheet. Products categorized as uncoated freesheet include copy paper, paper post-its, paper notebooks, envelopes and paper desk pads. Benefits were calculated using the Environmental Paper Network calculator.

8. Recycled Non-Paper Products

Maryland was able to successfully calculate the benefits associated with buying recycled non-paper products including plastic, metal, and mixed material content. Benefits of recycled non-paper products were calculated by using the EPA Recycled Content (ReCon) Tool (version 5).

[5] https://docplayer.net/11672387-The-carbon-footprint-of-remanufactured-versus-new-mono-toner-printer-cartridges.html

[6] Study: Reuse of Toner Cartridges Reduces Emissions, https://www.umsicht.fraunhofer.de/en/press-media/pressreleases/2019/interseroh-toner-cartridges.html

B. Green Purchasing Committee Membership

Department of General Services (Chair)
Atif Chaudhry | Secretary
Victoria Nellis, CPPB, NIGP-CPP, CMPO+GPS (Designee) | Green Purchasing Program Manager | Victoria.Nellis@maryland.gov
Sam Linton, CMPA (Staff) | Green Purchasing Data Coordinator | Sam.Linton@maryland.gov
Rod Johnson, CMPO | Strategic Sourcing Manager | Rod.Johnson@Maryland.gov
Lisa Nissley | Legislative Liaison | Lisa.Nissley@maryland.gov
Matthew Smith, CMPO + GPS | Procurement Officer | Matthew.Smith2@maryland.gov

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Joseph Consoli (Designee) | Fleet & Travel Administrator | Joseph.Consoli@maryland.gov

Department of Commerce
Rachel Cruse (Designee) | Procurement Supervisor | Rachel.Cruse1@maryland.gov

Department of Education
Jeremy Wilson (Designee) | Business Services Coordinator,
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Department of Environment
June Dwyer (Designee) | Procurement Officer | June.Dwyer1@maryland.gov
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Management & Procurement | Dionne.Washington@maryland.gov

Department of Information Technology
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Department of Natural Resources
Tracy Bees (Designee) | Socioeconomic Programs and Compliance Administrator | Theresa.Bees1@maryland.gov

Department of Public Safety and Correctional Services
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Joana Y. Pei | Associate Director | Office of Procurement Services | Joana.Pei@maryland.gov

State Treasurer
Cissy Blasi (Designee) | Deputy Treasurer for Operations | cblasi@treasurer.state.md.us

Department of Transportation
Eddie Lukemire (Designee) | Program Manager | ELukemire@mdot.maryland.gov

University System of Maryland
Thomas P. Hickey (Designee) | Director of Procurement and Real Property Initiatives | THickey@usmd.edu
Patricia Watson | Director of Sustainability, Towson University | pwatson@towson.edu

C. Agency Green Spend Report

The below table shows agency level green purchasing expenditures. When agencies are procuring green products or services outside of statewide contracts, that amount is included in the "Agency Green Spend" column.

Agency	Agency Green Spend	Statewide Green Spend	Electric & Hybrid Vehicle Spend	Total Green Spend	Total Commodity Spend	% Green
Alcohol, Tobacco, and Cannabis Commission	-	$7,574.44	-	$7,574.44	-	-
Baltimore City Community College	-	$603.00	-	$603.00	$7,222,784.00	0.01%
Board of Contract Appeals	-	$712.27	-	$712.27	$1,419.00	50.20%
Board of Nursing	-	$2,254.86	-	$2,254.86	$113,812.00	1.98%
Board of Public Works	-	$105.64	-	$105.64	$17,175.00	0.62%
Bowie State University	-	$340,752.30	-	$340,752.30	$6,723,055.00	5.07%
Comptroller of Maryland	-	$1,015,351.08	-	$1,015,351.08	$12,044,808.00	8.43%
Coppin State University	-	$7,563.27	-	$7,563.27	$4,281,757.00	0.18%
Department of Aging	-	-	-	$0.00	$409,216.00	0.00%
Department of Agriculture	-	$22,055.26	$50,090.00	$72,145.26	$1,925,858.00	3.75%
Department of Budget and Management	-	$46,674.51	-	$46,674.51	$493,400.00	9.46%
Department of Commerce	-	$177,688.37	-	$177,688.37	$193,363.00	91.89%
Department of Disabilities	-	$40,906.91	-	$40,906.91	$42,778.00	95.63%
Department of Environment	$116,059.19	$199,485.23	$48,590.00	$364,134.42	$1,733,141.00	21.0%
Department of General Services	-	$1,593,373.14	-	$1,593,373.14	$1,613,783.00	98.74%
Department of Health	-	$1,807,386.42	-	$1,807,386.42	$218,816,187.00	0.83%
Department of Housing and Community Dev.	$14,613,491.25	$69,566.54	-	$14,683,057.79	$927,506.00	1583.1%*

Agency	Agency Green Spend	Statewide Green Spend	Electric & Hybrid Vehicle Spend	Total Green Spend	Total Commodity Spend	% Green
Department of Human Services	-	$2,684,933.14	$253,323.00	$2,938,256.14	$7,230,215.00	40.64%
Department of Information Technology	-	$16,631.21	-	$16,631.21	$16,197,209.00	0.10%
Department of Juvenile Services	-	$632,862.71	-	$632,862.71	$11,719,511.00	5.40%
Department of Natural Resources	-	$505,140.22	$28,260.00	$533,400.22	$17,469,453.00	3.05%
Department of Planning	-	$21,857.31	$31,144.00	$53,001.31	$878,924.00	6.03%
Department of Public Safety and Correctional Services	$237,508.64	$6,462,300.24	-	$6,699,808.88	$84,520,694.00	7.9%
Department of Transportation	-	$176,041.75	-	$176,041.75	$84,561,921.00	0.21%
Department of Veterans Affairs	-	$21,100.18	-	$21,100.18	$1,702,412.00	1.24%
Executive Department - Governor	-	$3,293.17	-	$3,293.17	$296,750.00	1.11%
Frostburg State	-	$31,754.65	-	$31,754.65	$3,773,914.00	0.84%
General Assembly (Legislative Branch)	-	$19,732.00	-	$19,732.00	$5,139,356.00	0.38%
Governors Office of Crime Control & Prevention	-	$2,224.56	-	$2,224.56	$21,810.00	10.20%
Judiciary	-	$474,773.13	-	$474,773.13	$17,354,397.00	2.74%
Maryland 529	-	$43.50	-	$43.50	-	-
Maryland Aviation Administration	$75,822.60	$2,799,343.34		$2,875,165.94	$11,068,384.00	25.98%
Maryland Cannabis Administration	-	$9,890.65	-	$9,890.65	-	-
Maryland Commission on Civil Rights	-	$3,243.69	-	$3,243.69	$36,927.00	8.78%
Maryland Department of Emergency Management	-	$6,545.06	-	$6,545.06	$137,742.00	4.75%
Maryland Department of Labor	-	$566,160.35	-	$566,160.35	$10,868,302.00	5.21%

Agency	Agency Green Spend	Statewide Green Spend	Electric & Hybrid Vehicle Spend	Total Green Spend	Total Commodity Spend	% Green
Maryland Energy Administration	-	$19,251.55	-	$19,251.55	$90,009.00	21.39%
Maryland Environmental Service	-	$23,801.42	-	$23,801.42	$10,096,138.00	0.24%
Maryland Food Center Authority	-	$1,154.16	-	$1,154.16	$147,850.00	0.78%
Maryland Higher Education Commission	-	$2,928.97	-	$2,928.97	$30,543.00	9.59%
Maryland Institute for Emergency Medical Services Systems	-	$5,448.04	-	$5,448.04	$253,112.00	2.15%
Maryland Insurance Administration	-	$77,689.89	-	$77,689.89	$827,427.00	9.39%
Maryland Lottery and Gaming Control Agency	-	$361,717.50	-	$361,717.50	$473,142.00	76.45%
Maryland Port Administration	$139,823.00	$577,226.20	-	$717,049.20	$6,156,312.00	11.65%
Maryland Public Broadcasting Commission	-	$26,289.09	-	$26,289.09	$916,255.00	2.87%
Maryland School for the Deaf	-	$100,759.60	-	$100,759.60	$2,026,735.00	4.97%
Maryland Stadium Authority	$40,752.46	$213,814.36	-	$254,566.82	$808,554.00	31.48%
Maryland State Library Agency	-	$2,382.79	-	$2,382.79	$37,228.00	6.40%
Maryland State Retirement and Pension System	-	$15,635.19	-	$15,635.19	$320,002.00	4.89%
Maryland Transit Administration	-	$646,147.42	$261,585.00	$907,732.42	$7,351,542.00	12.35%
Maryland Transportation Authority	-	$379,236.41	$137,920.00	$517,156.41	$14,174,724.00	3.65%
Military Department	$32,745.00	$197,290.53	-	$230,035.53	$1,072,137.00	21.46%
Morgan State University	-	$273,335.38	-	$273,335.38	$14,924,859.00	1.83%
Motor Vehicle Administration	$814,099.16	$438,156.97	$36,879.00	$1,289,135.13	$5,135,288.00	25.10%
Northeast Maryland Waste Disposal Authority	-	$1,053.31	-	$1,053.31	-	-

Agency	Agency Green Spend	Statewide Green Spend	Electric & Hybrid Vehicle Spend	Total Green Spend	Total Commodity Spend	% Green
Office of Administrative Hearings	-	$93,796.78	-	$93,796.78	$212,676.00	44.10%
Office of the Attorney General	-	$198,129.15	-	$198,129.15	$1,308,487.00	15.14%
Office of the People's Counsel	-	$5,190.75	-	$5,190.75	$72,711	7.14%
Office of the Public Defender	-	$890,742.62	-	$890,742.62	$2,354,898.00	37.83%
Office of the State Prosecutor	-	$1,671.46	-	$1,671.46	-	-
Office of the Register of Wills	-	$134,689.26	-	$134,689.26	-	-
Property Tax Assessment Appeals Boards	-	-	-	-	$5,415.00	0.00%
Public Service Commission	-	$31,872.69	-	$31,872.69	$93,354.00	34.14%
Salisbury University	-	$247,939.38	-	$247,939.38	$11,236,776.00	2.21%
Secretary of State	-	$1,073.68	-	$1,073.68	$105,953.00	1.01%
State Archives	-	$8,948.76	-	$8,948.76	$534,921.00	1.67%
State Board of Elections	$69,179.36	-	-	$69,179.36	$6,401,184.00	1.08%
State Department of Assessments and Taxation	$1,196.07	$954,081.99	-	$955,278.06	$2,631,885.00	36.30%
State Department of Education	-	$898,715.30	-	$423,911.01	$3,709,549.00	11.43%
State Ethics Commission	-	$419.97	-	$419.97	$48,247.00	0.87%
State Highway Administration	-	$485,868.68	$72,378.00	$485,868.68	$34,984,483.00	1.39%
State Police	-	$645,245.80	-	$645,245.80	$23,382,892.00	2.76%
State Treasurer's Office	-	$16,601.39	-	$16,601.39	$375,481.00	4.42%
The Secretary's Office (MDOT-TSO)	-	-	-	$0.00	$5,691,188.00	0.00%

Agency	Agency Green Spend	Statewide Green Spend	Electric & Hybrid Vehicle Spend	Total Green Spend	Total Commodity Spend	% Green
Towson University	$726,189.49	$293,296.72	-	$1,019,486.21	$35,432,164.00	2.88%
University of Baltimore	$16,896.20	$93,334.88	-	$110,231.08	$3,936,624.00	2.80%
University of Maryland Baltimore	$10,288,228.17	$504,846.83	-	$10,793,075.00	$63,947,324.00	16.88%
University of Maryland Baltimore County	-	$93,168.60	-	$93,168.60	$27,739,095.00	0.34%
University of Maryland Center for Environmental Science	-	-	-	$0.00	$2,739,262.00	0.00%
University of Maryland College Park	$423,269.39	$535,548.87	-	$958,818.26	$149,710,921.00	0.64%
University of Maryland Eastern Shore	$4,890.00	$128,618.58	-	$133,508.58	$17,264,868.00	0.77%
University of Maryland Global Campus	$8,928.62	$129.34	-	$9,057.96	$5,503,916.00	0.16%
University System of Maryland	-	$703,873.33	-	$703,873.33	$334,289,504.00	0.21%
Unknown Agency	-	$20,844,154.49	-	$20,844,154.49	-	-
Worker's Compensation Commission	-	$13,914.82	-	$13,914.82	$157,752.00	8.82%

*Totals are based on state funds received by agencies. Agency received federal grant that was used for Green IT products – allowing for green spend totals above total state funds received.

MARYLAND
Green Purchasing Committee

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