

# Reductions in Energy Consumption and Greenhouse Gas Emissions

Annual Report  
FISCAL YEAR 2025

Environmental Article 2-1305(c)  
Executive Order 01.01.2023.07

Department of General Services

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# Maryland Department of General Services

Status Update on Programs that Support the State's Greenhouse Gas Reduction Efforts or Address Climate Change



Annual Report for 2025

In accordance with §2-1305, *Environment Article, Maryland Annotated Code*  
Prepared for the Maryland Commission on Climate Change and the Governor

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## Introduction

In accordance with §2-1305 of the Environmental Article, the Department of General Services (DGS) submits its annual report to the Governor and the Maryland Commission on Climate Change on the status of programs that support the State's Greenhouse Gas Reduction Act (GGRA) efforts or address climate change. This report will highlight how programs run by the DGS Office of Energy and Sustainability (Energy Office) reduce greenhouse gases and other air pollutants. This report presents estimated greenhouse gas reductions for the calendar years 2010 through 2025.

The Energy Office performs several functions that positively contribute to the State's greenhouse gas reduction efforts. The Energy Office purchases renewable energy, installs electric vehicle (EV) infrastructure, operates the Energy Performance Contracting (EPC) program, reports on progress towards the energy savings goal of Governor Moore's Executive Order 01.01.2023.07 *Leading by Example in State Government*, performs energy retrofit projects at State facilities, manages a statewide utility tracking database, and chairs the Green Purchasing Committee. The Energy Office also supports the Maryland Green Building Council, engages in pilot programs, such as retro-commissioning existing State facilities, develops procurements and plans to decarbonize the state's facilities, and fields calls from agencies on various energy conservation related topics. Since the 2023 issuance of Governor Moore's Executive Order 01.01.2023.07, the Energy Office has taken on a leadership role in meeting the energy savings goal of the Executive Order.

### **Executive Order 01.01.2023.07**

Governor Moore's Executive Order, *Leading by Example in State Government*, calls on the Energy Office to perform several tasks to help achieve 20% energy savings in State-owned buildings by 2031 based on an FY18 baseline. Tasks outlined for the Energy Office include: identify potential candidates for energy savings performance contracts at State-owned facilities, conduct energy and greenhouse gas emissions audits on at least 2 million square feet of State-owned buildings, present the building owners with the recommendations from the audit reports, track the energy use in those buildings after upgrades, and report progress towards meeting the overall goal to the Governor.

Beyond fulfilling the specific tasks outlined in the Executive Order, the Energy Office has formed a Working Group on Reducing Energy Use in State Operations, whose members include representatives from the 20 agencies and university campuses that are responsible for 90% of the State government's energy use. The Working Group meets quarterly to coordinate efforts, collaborate on solutions, and share successes on reducing energy use in State facilities. The third [Annual Report](#) on the Executive Order was submitted to the Governor in August 2025.

## Funding

The Maryland Energy Administration (MEA) manages the Strategic Energy Investment Fund (SEIF). SEIF funds were used to support multiple greenhouse gas reduction programs at DGS - the Energy Performance Contracting program, installing energy-efficient lighting, installing electric vehicle charging stations for fleet vehicles, improving and updating data in the Statewide Utility Database, and developing new state contracts with providers of utility rebate programs. The FY 2025 SIEF appropriated budget was \$4,849,731. The Energy Office also charges fees to other state agencies for performing measurement and verification on energy performance contract projects, and for purchasing power for all state agencies. These fees support the purchase of renewable energy and office staffing. Revenue from these activities was approximately \$2.7 million in FY 2025.

## Program Objectives and Implementation

### Energy Commodities Purchasing

The Energy Office partners with the University System of Maryland to purchase over \$200 million in electricity and natural gas annually. Included in the energy commodity purchases are three 20-year Power Purchase Agreements (PPAs) of renewable energy from two utility-scale wind installations, and one solar installation. In FY 2025, the State of Maryland spent approximately \$20 million on renewable electricity which accounted for 10% of the electricity cost for State operations.

Facility name	Initial Delivery Year	Size	FY 25 Total Generation (MWH)	FY 25 Total Expenditure (\$)
Mount St. Mary's (Solar)	2012	13 MW	18,255	\$4,056,727
Pinnacle (Wind)	2011	53.7 MW	199,488	\$13,205,118
Roth Rock (Wind)	2011	10 MW	26,857	\$2,759,269
<b>Totals</b>			<b>244,599</b>	<b>\$20,021,114</b>

In FY 2025 the Energy Office issued an Invitation for Bids for additional solar and wind energy with the goal of achieving 100% clean energy purchases by 2035. The Energy Office has continued to navigate procurement challenges under the POWER Act (SB 781, Ch. 95, 2023) to purchase offshore wind in partnership with the Public Service Commission. Offshore wind has been negatively impacted by Federal permitting and policy.

DGS also currently has solar PV installations at four agency buildings, with total capacity of 432 kW and generating 361,119 kWh in FY 2025<sup>1</sup>:

- Tawes State Office Building - 580 Taylor Avenue. Annapolis - 126 kW
- John R. Hargrove, Sr. DC & MS Center -700 E. Patapsco Ave., Baltimore - 106 kW
- Elkton DC & MS Center -170 E. Main St., Elkton - 74 kW
- Ellicott City DC & MS Center -3451 Courthouse Dr., Ellicott City - 126 kW

DGS's purchases of renewable energy enabled the State to prevent approximately 76,877 Metric Tons of carbon dioxide equivalent (CO<sub>2</sub>e) from entering the atmosphere. This is the equivalent of taking 17,932 passenger vehicles off the road for one year.<sup>2</sup> Forecasting and planning into the uncertain future for energy needs, pricing, and renewables generation can be a challenge, but the State's goal for zero emissions is a guiding tenet for decision-making balancing price, resilience, and environmental stewardship.

### **Energy Performance Contracting (EPC)**

An energy performance contract is a multi-million-dollar construction project in which the project's cost is paid for over time through guaranteed annual energy and operational savings. The Energy Office in DGS drafts and manages the contract that defines the processes and requirements of an EPC and prequalifies the Energy Service Companies (ESCO) that will perform each project. The ESCOs provide the energy savings guarantee for each project. The primary value of the EPC model is the guarantee of financial savings. The existence of a savings guarantee allows the state, through the Treasurer's Office, to finance EPCs using a lease arrangement without impacting the state's credit rating or borrowing limit.

The Energy Office has been managing the state's EPC program since the mid-1990s and was one of the first adopters of using the EPC model to reduce energy costs. As of a couple years ago, there were nearly 30 ongoing projects, but several have aged out so that there are currently 20 projects in the measurement and verification (M&V) stage. The most recent EPC entered the construction phase in 2018. There are three projects currently under development:

1. Maryland Transit Administration – multiple locations – in Procurement
2. Department of Public Safety and Corrections – preliminary investigation – Hagerstown Complex
3. DGS Facilities – preliminary investigation

The EPC program has provided considerable cost-effective energy savings and GHG reductions since its inception. In FY 2025, the EPC program achieved \$16 million in cost

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<sup>1</sup> DGS does not own the Renewable Energy Credits (REC) for these installations.

<sup>2</sup> Calculated using EPA Greenhouse Gas Equivalencies Calculator, <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

savings and 70,400 tons in greenhouse gas emissions reductions, as substantiated by contracted third-party monitoring and verification (M&V).

Several carbon-reducing mandates have been issued over the past few years, but since cost savings are not typically associated with decarbonizing a facility, EPC alone does not fully address decarbonization in its entirety. However, the EPC program plays a significant role in decarbonizing state-owned facilities under the right circumstances and with the right support. To meet Building Energy Performance Standards (BEPS) and other decarbonization mandates, additional funding mechanisms may be necessary. Enhanced collaboration between agencies and DGS will support the continued use of EPCs as an important tool in reaching net-zero statewide greenhouse gas emissions by 2045.

## **Other Building Energy Reduction Efforts**

### **Audits**

Tasks outlined for the Energy Office in Governor Moore's Executive Order, *Leading by Example in State Government*, include conducting energy and greenhouse gas emissions audits on at least 2 million square feet of State-owned buildings and presenting the building owners with the recommendations from the audit reports. In FY 2025, DGS performed physical energy audits on 1.8 million square feet of building space and 30 million sq. ft. of virtual audits using the Rapid Energy Audit (REA) software tool, encumbering \$340,000 in FY 2025 SEIF funds to perform Energy Savings Analysis (ESA).

The development and use of the REA tool has allowed the Energy Office to significantly scale the reach of the building audit program while realizing the co-benefit of hands-on energy audit workforce experience for students at the University of Maryland. The REA, which continued development in FY 2025, created the ability to virtually rank state buildings by energy usage and carbon emissions. Increased and continued agency engagement will help maximize the program's impact and support the translation of audit findings into energy reductions.

### **Lighting Upgrades**

The Energy Office, working with project managers from the Facilities Engineering and Design office at DGS, has managed the installation of over 44,000 state-of-the-art LED light fixtures and controls in over 35 buildings throughout the state totaling 3.7 million square feet at several state agencies. Since FY 2021, the Energy Office has encumbered \$9.5 million in SEIF funds. Total project savings are expected to be 6,600 MWh of electricity, a \$1.4 million annual operating expense avoidance, and a yearly CO2 emissions reduction of 5,410 metric tons. The projects are expected to be completed by the end of 2026. Lighting upgrades are a key and basic tactic for increasing energy efficiency in a building. Coordinating work across multiple agencies and minimizing impacts to occupants requires thoughtful planning, which the project teams continue to support.

### **Retro-Commissioning**

In December 2020, the Energy Office completed a retro-commissioning pilot project at the Rockville Multi-Service Center. This building was selected because it was identified as having an excessively high Energy Use Intensity (EUI). The project included an in-depth evaluation of opportunities to improve the efficiency of an existing building's HVAC equipment and control systems. The results achieved a 25% electricity reduction and a 30% reduction in natural gas from 2020 to 2025.

In 2022, the Energy Office began retro-commissioning evaluations and energy conservation measure (ECM) implementation at two other DGS-owned properties with relatively higher EUIs. However, the Energy Office identified a range of conditions that influenced the potential for efficiency gains, including the need to address air quality requirements, such as ventilation and humidity control, as well as pre-existing maintenance items. Between 2022 and 2025, the buildings achieved modest reductions in electricity consumption and 3% reduction in natural gas consumption due to retro-commissioning.

The funding source available at that time to pay for this work required efficiency improvements with returns on investment. As a result, the variability in potential outcomes influenced the approach to developing large-scale programs.

In 2025, the Energy Office applied for and obtained approval to utilize a utility incentive program (building tune-up) to optimize buildings. This program provides significant funding and has been designed to include relevant ECMs. DGS will pilot the program in 2026 at four buildings. Energy consumption will be tracked in subsequent years.

### **Sustainable Building Design**

The Energy Office has been working with DGS Capital and Facilities Maintenance divisions in recent years to integrate "green" building practices into building design and renovations. The Energy Office drafted a "Green Building Standards" document and presented its contents on a webinar with several of the capital and maintenance division project managers and later gave the presentation to the architectural and engineering firms contracted with DGS. Following that presentation, the Energy Office hosted a webinar for project managers on "HVAC Sizing Considerations" to address a common problem encountered when designing new and replacement HVAC systems. To make sustainable building an ongoing and permanent part of DGS's decision-making process, OES drafted an addendum to the DGS Procedure Manual that incorporated energy-efficient and sustainable design into common practices.

Maryland Governor Moore signed the *Eligible Projects – Procurement of Construction Materials* bill (Buy Clean Maryland Act) into law in 2023 (HB 261/SB 424, Chs. 201/202, 2023<sup>3</sup>) and has committed the state to prioritize efforts that support the procurement of lower-carbon infrastructure materials in state-funded projects. With cement and concrete's

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<sup>3</sup> [HB 261/SB 424, Chs. 201/202, 2023](#)

carbon emissions from building construction in the United States representing a significant contribution annually, “eligible” low carbon materials in the Act addresses the emissions of these materials used for capital projects.<sup>4</sup> An “eligible” project is one that is subject to the High Performance Green Building Program (HPGBP)<sup>5</sup>. The Energy Office received a grant of approximately \$50,000 from the U.S. Climate Alliance, administered by the Maryland Department of the Environment, to secure the services of a consultant, Green Plum Street. This consultant identified and quantified embodied carbon in materials, including life cycle costs, and determined initial acceptable GWP limits for cement and concrete in March 2025.

Beginning July 1, 2026, State agencies must specify in each solicitation for a construction project subject to the HPGBP the cement or concrete mixture that will be used in the project and the reasonable minimum usage thresholds below which the bill’s requirements do not apply; contractors may not install any cement or concrete mixture before they submit environmental product declarations (EPDs). For each eligible project, concrete manufacturers shall submit to the owner an Environmental Product Declaration Level Type III, as defined by the International Organization for Standardization Standard 14025, or a similarly robust life-cycle assessment method that includes uniform standards for data collection. Maryland Embodied Carbon Acceptable Thresholds for cement should be 115% GWP of the National Ready Mixed Concrete Association Eastern Region benchmarks for ready-mixed concrete.<sup>6</sup> This will be reviewed by DGS every three years after July 2026.

Following MDE’s issuance of the Building Energy Performance Standards (BEPS) regulations, DGS adopted an all-electric policy for DGS-supported state-owned facilities in March 2025 and is developing decarbonization plans for 23.4 million sq. ft. of DGS-supported facilities. The decarbonization plan is on track and is expected to be completed and disseminated to all relevant stakeholders by the end of FY 2026.

### **Maryland Green Building Council**

DGS is the supporting agency for the Maryland Green Building Council. The Council was created in 2007 to guide Maryland’s High-Performance Green Building Program (HPGBP, or Program). The Council comprises members from the private sector and state agencies. It makes recommendations regarding implementation of the High-Performance Green Building Program to the Department of General Services, the Maryland Governor and General Assembly. It assists the Governor and General Assembly on reviews and recommendations regarding green building legislation and promotes green building throughout Maryland’s government and private sector.

All new and renovated State of Maryland facilities larger than 7,500 gross square feet which are fully funded by the state, kindergarten through 12th grade (K-12) public schools and new community college buildings are required to comply with the Maryland HPGBP. A High Performance Building is one which achieves either a Silver rating or better under the U.S.

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<sup>4</sup> Maryland Department of the Environment “[Industry](#)”

<sup>5</sup> State Finance and Procurement [§4-903](#)

<sup>6</sup> [Maryland High Performance Green Building Program](#)

Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system, a two Green Globes rating or better under the Green Building Initiative's Green Globes rating system, or which complies with the Maryland Green Building Council's supplement to the International Green Construction Code (IgCC) enacted in November 2014. In 2025, the Green Building Council undertook a significant revision of the HPGBP to reflect LEED v5 and establish equivalencies across Green Globes and the IgCC.

### **Utility Bill Tracking Database "State Energy Database"**

The Energy Office maintains the nation's most comprehensive statewide utility database for tracking energy consumption and cost for all state-owned and leased facilities. The database allows the Energy Office and other agencies to analyze their energy consumption patterns over time in order to identify poorly performing facilities, and to track the progress of facilities undergoing energy efficiency projects. The database is used extensively during the development and measurement and verification stages of EPCs. It also is an instrumental tool that enables the State to engage in financially beneficial strategies for energy purchasing.

In FY 2020, building attributes such as square footage, build year, leased/owned status, and primary use were added for the majority of the state's portfolio. Additionally, building/meter relationships were confirmed, allowing the State to identify buildings that are individually metered for further building-level benchmarking and analysis, and to verify campuses that share utility meters for potential future submetering opportunities. The result was a comprehensive report of all State-owned and independently metered buildings, with their energy usage data so their progress may be tracked over time. This has also aided the State's effort to comply with the Building Energy Performance Standards (BEPS) by organizing and aggregating Agency data.

Data from 136 meters installed on 16 buildings in the Annapolis Capital Complex collects consumption data including steam, electricity, chilled water, natural gas and domestic water. Data from the meters has helped staff identify problems and track usage.

This year, utilizing SEIF funds, work on the database included tracking and reporting energy use data for Governor Moore's Executive Order which entails working with 20 agencies and university campuses to collect and analyze utility billing data. The Energy Office continues to collaborate with the contractor that manages the database to add functionality for submeter data, making it a more useful tool for tracking and analyzing energy consumption on a per-building basis.

Maryland has led the way in data transparency by ensuring that the energy database is available in a public-facing version, hosted on the DGS website. The database is also available (with detailed cost and consumption data) to over 200 state agency users with log-in privileges. As statewide data management grows, improving the accuracy, timeliness, and availability of utility bill and submeter data as an input to the database remains a key priority.

## Green Purchasing Committee

The Maryland Green Purchasing Committee is an interagency committee established by the Green Maryland Act of 2010, tasked with providing the State with education and training promoting environmentally preferable purchasing. Chaired and staffed by the DGS Office of Energy & Sustainability, the Committee develops and implements statewide green purchasing policies, guidelines, programs, best practices, and regulations that will provide benefits to the health and well-being of Maryland citizens and the environment. The Committee approves and publishes tools and guidelines for state purchasers that limit the use of hazardous or toxic materials and advance the conservation of natural resources and energy in state agency operations. Specifications for the procurement of certain environmentally friendly goods and services are created, approved, and published for State agencies to adopt. In FY 2025, the Committee issued 7 new or updated specifications:

- Electronics & IT Products
- Batteries & Battery Chargers
- Paper
- Landscaping Supplies
- Appliances
- Toner Cartridges
- Plumbing Fixtures

There was over \$100 million spent on environmentally preferable purchases in FY24, reflecting a significant increase in the percent of total spend compared to FY23 and an increase in agencies reporting. FY 2025 outcomes will be published in December 2025. Environmentally preferred commodities include office supplies, janitorial supplies, IT equipment, paints and coatings, and food service supplies. The FY24 spend includes benefits such as 149,752 CO2 emissions avoided and 28,031 tons of material conserved.

The Energy Office launched a Green Purchasing Training Module in 2020, as part of the Maryland Procurement Academy, where state procurement professionals learn the basics of green purchasing to apply in procurement practices. Training has been expanded to include quarterly training on green specifications, biannual agency reporting training, biannual vendor reporting training, and a new training session on green procurement cards. In FY 2025, specification training topics included Janitorial Supplies, Electronic and IT products, Landscaping Services, and Integrated Pest Management. Green Purchasing 101 was attended by 241 participants, Certified Maryland Procurement Officer training included 75 attendees, and Green Purchasing Specialization graduated 28 people to increase the total certified to 63.

In FY 2025, the Green Purchasing Committee also earned the EPEAT Purchaser Award for the 6th year in a row with the purchase of 29,051 EPEAT certified products. This award demonstrates over \$4.5 million in cost savings, and an energy savings of 45,065,961 Kwh, equivalent to the annual electricity consumption of 3,710 average U.S. households.

Advancing green purchasing statewide presents an opportunity to further support agencies in implementing comprehensive practices and providing timely data for progress tracking. Designating a green purchasing liaison within each agency would help strengthen consistency and streamline implementation efforts. The Green Purchasing Committee, in partnership with the Office of State Procurement, continues to integrate green purchasing considerations into standard workflows, increasing the inclusion of green purchasing in solicitations around the State.

## **Electric Vehicle Infrastructure**

The electrification of the state's fleet is a crucial aspect of Maryland's climate change mitigation strategy. As electric vehicles (EVs) enter the fleet, state facilities require adequate charging infrastructure to support them. To this end, DGS takes the lead in establishing a statewide EV infrastructure strategy and installing fleet charging equipment at state-owned facilities.

The Climate Solutions Now Act of 2022 requires the state's fleet to transition to zero-emission vehicles and designates the Department of General Services to ensure adequate charging infrastructure at state facilities. In 2024, DGS was awarded EVAL Gold status for its transportation electrification and workplace charging initiatives.

To involve other stakeholders, DGS holds monthly EV Stakeholder update meetings to share information about current and upcoming EV charging projects and other relevant information. DGS also hosted numerous educational events such as a ride and drive at the annual DGS Earth Day event and a Lunch and Learn with ride and drive in Cumberland for DJS staff and state employees at Montgomery Park. The DGS Electric Vehicle Infrastructure Program (EVIP) website includes resources and information for state agencies related to EVs and EV charging.

In FY 2025, the DGS EVIP team completed projects at 15 locations throughout the State. These projects resulted in 118 level 2 (L2) ports and 5 DC Fast Charging (DCFC) ports, for a total of 123 new ports. This brings the total to 251 ports across the State (excluding utility partner stations) with 222 networked ports, 23 non-networked ports, and 6 DCFC ports across 37 projects. Utility partnership projects add 87 ports (76 networked L2 ports and 11 DCFC ports across 16 projects. This represents significant progress in creating the infrastructure necessary for State fleet electrification. The Energy Office encumbered \$971,071 in SEIF funds in FY 2025 in support of electric vehicle infrastructure.

Significant considerations for the State and the EV charging market include network interoperability, the transition to evolving charging standards, and the coordination needed among multiple stakeholders such as agencies, landlords, and utilities.

*For additional information on DGS's programs supporting energy efficiency and greenhouse gas reductions, visit <https://dgs.maryland.gov> and select "Energy & Sustainability."*