

Larry Hogan  
Governor

Boyd K. Rutherford  
Lt. Governor



Ellington E. Churchill, Jr.  
Secretary

MARYLAND DEPARTMENT OF GENERAL SERVICES  
OFFICE OF THE SECRETARY

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November 12, 2019

The Honorable Larry Hogan  
Governor of Maryland.  
100 State Circle  
Annapolis, Maryland 21401

Mr. Ben Grumbles  
Chair, Maryland Commission on Climate Change  
1800 Washington Boulevard  
Baltimore, Maryland 21230

Re: Annual Report on the State of the Department of General Services' Programs that  
Support the State's Greenhouse Gas Reduction Efforts or Address Climate Change  
Environment Article §2-1305

Dear Governor Hogan and Chair Grumbles:

The Department of General Services is pleased to submit the above referenced report which highlights how our Renewable Energy Purchasing, Energy Database and Energy Performance Contracting programs work together to abate environmental impacts. The report was written in response to and in accordance with §2-1305 of the Environment Article.

Should you have any questions or require additional information, please feel free to contact Mr. David St. Jean, Director of the Office Energy Performance and Conservation, at 410-767-4472 or [David.StJean1@maryland.gov](mailto:David.StJean1@maryland.gov).

Sincerely,

A handwritten signature in blue ink that reads "Ellington E. Churchill, Jr.".

Ellington E. Churchill, Jr.  
Secretary

c: Sarah Albert, DLS Library  
David St. Jean, DGS Office of Energy  
Lauren Buckler, DGS Office of Design, Construction and Energy



# Annual Report on the Status of Department of General Services Programs that Support the State’s Greenhouse Gas Reduction Efforts or Address Climate Change

October 22, 2019

In accordance with §2-1305 of the Environment 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 Performance and Conservation reduce greenhouse gases and other air pollutants. This report shows estimated greenhouse gas reductions for the years 2010 through the 2018 calendar year.

## DGS Energy Office

The DGS Office of Energy Performance and Conservation (“Energy Office”) performs four primary functions that positively contribute to the State’s greenhouse gas reduction efforts. The Energy Office purchases renewable energy, operates the Energy Performance Contracting (EPC) program, chairs the Green Purchasing Committee, and manages a statewide utility tracking database. Beyond these primary functions, the Energy Office also serves as the Energy Manager for DGS’ 6.5 million square feet of facilities, engages in pilot programs, such as retro-commissioning existing State facilities, and fields calls from agencies on various energy conservation related topics. Beginning with the June issuance of Governor Hogan’s Executive Order 01.01.2019.08, *Energy Savings Goals for State Government*, the Energy Office has taken on a leadership role in meeting the energy saving goal of the EO. The following describes each primary function of the DGS Energy Office in more detail.

## Energy Commodities Purchasing

The Energy Office partners with USM to purchase over \$175 million annually of electricity and natural gas using purchasing strategies, that from FY12 to FY18 allowed the State to avoid over \$74 million in expenses related to these commodities. 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.

Facility name	Initial Delivery Year	Size	FY 19 Total Generation (MWH)	FY 19 Total Expenditure (\$)
Mount St. Mary’s (Solar)	2012	13 MW	18,936	\$3,950,227
Pinnacle (Wind)	2011	55.2 MW	157,076	\$12,309,486
Roth Rock (Wind)	2011	10 MW	26,952	\$2,449,583
Totals			202,964	\$18,709,296

As of 2018, the Renewable Energy Credits (RECs) produced by the facilities above surpassed the State's Renewable Portfolio Standard obligation. The Energy Office is planning on additional purchases of renewable energy in the near future as required under the recently enacted increase to the RPS.

DGS also currently has Solar PV installations at four agency buildings, with total capacity of 432 kW and generating approximately 520,000 kWh per year<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

Renewable energy accounted for 13.2% of the electricity for State operations in FY 2019. It enabled the State to prevent approximately 143,526 metric tons of carbon dioxide equivalent (CO<sub>2</sub>e) from entering the atmosphere. This is the equivalent of taking 30,473 passenger vehicles off the road for one year.<sup>2</sup>

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

An EPC is a multi-million-dollar energy project in which the cost of the project is paid for over time through guaranteed annual energy and operational savings. The Energy Office 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 Energy Office has been managing the State's EPC program since 2003, during which time 29 EPC projects have been initiated. The EPC program is the State's greatest single contributor to the development of energy efficiency and energy conservation strategies within State facilities.

The EPC program, as a whole, has provided considerable cost-effective energy savings and GHG reductions since its inception. Table A on the following page indicates energy savings and CO<sub>2</sub> reductions associated with EPC projects since 2010.

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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/greenhousegas-equivalencies-calculator>

**TABLE A**

<b>Energy Performance Contracting</b>				
<b>Agency-Facility</b>	<b>Current Status</b>	<b>Construction Completion Date</b>	<b>Energy Savings (MMBTU)</b>	<b>Annual CO2 Reduction Tons</b>
DHMH-Spring Grove Hospital	M&V	02/01/10	267,504	14,979
University of Baltimore	M&V	02/28/10	31,465	2,990
Veterans Affairs	M&V	05/31/10	1,999	253
UMCES- Horn Point Lab	M&V	10/01/10	12,652	1,253
Work Force Technology Center	M&V	12/01/10	14,593	1,421
DGS Buildings	M&V	01/01/11	60,730	5,979
MDA-Agriculture	M&V	02/01/11	7,618	963
State Police	M&V	06/30/11	3,683	746
UM College Park- 9 buildings	M&V	01/01/12	59,060	3,538
UMCES- Chesapeake Lab	M&V	01/01/12	6,154	604
MTA	M&V	04/12/12	16,030	2,027
DPSCS- Jessup	M&V	06/30/12	224,504	14,412
MdTA	M&V	10/18/12	30,712	3,285
Towson Univ. Part 1	M&V	12/01/12	32,740	4,139
MAA	M&V	12/04/12	119,150	10,965
Bowie State University	M&V	01/31/13	6,791	547
Port Administration	M&V		100,307	5,380
UMBC- Part 1	M&V	07/31/13	20,855	2,637
UMCP- Athletic Dept.-	M&V	09/30/13	4,450	555
SHA -I	M&V	10/01/13	70,398	7,928
Department of Juvenile Services	M&V	1/6/2017	25,412	2,392
DNR - Sandy point State Park	N/A	12/15/2017	1,290	163
DHMH- Springfield Hospital	M&V	7/31/2018	14,641	1,205
Finan Center	M&V	7/23/2019	9,557	1,131
MVA	M&V	10/1/2019	19,223	2,123
Perkins and Holly Center	M&V	6/30/2019	24,679	3,490
DPSCS - WCI & NBCI	Phase II	TBD	22,758	16,326
<b>Total</b>			<b>1,208,956</b>	<b>111,432</b>

**Executive Order 01.01.2019.08**

Governor Hogan’s Executive Order titled, *Energy Savings Goals for State Government*, calls on the Energy Office to perform several tasks to help achieve 10% energy savings in State-owned buildings by 2029 based on an FY18 baseline. Tasks outlined for the Energy Office include: creating an accurate energy baseline for FY18, identifying 2 million square feet of buildings with

cost-effective energy saving opportunities, performing energy audits on those buildings, presenting the building owners with the recommendations from the audit reports, tracking the energy use in those buildings after upgrades, and reporting 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, or 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.

### **Green Purchasing Committee**

The Maryland Green Purchasing Committee is an interagency committee created by the Green Maryland Act of 2010, and is tasked with providing the State with education and training promoting environmentally preferable purchasing. The Committee develops and implements statewide green purchasing policies, guidelines, programs, best practices, and regulations which will provide benefits to the health and well-being of Maryland citizens and the environment.

The Committee initially focused on the creation of guidelines for state purchasers that would advance the conservation of natural resources and energy in state agency operations. Specifications for the procurement of certain environmentally friendly goods and services have since been created in order to outline such requirements. Additionally, the Committee has delivered training and organized educational events to further promote Maryland's leadership in environmentally preferable purchasing.

In FY 2019, environmentally preferable purchasing by Maryland State agencies totaled \$32,339,005. Environmentally preferred commodities purchased include: office supplies, janitorial supplies, IT equipment, paints and coatings, and food service supplies.

### **Utility Bill Tracking 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 poor 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.