

Larry Hogan  
Governor

Boyd K. Rutherford  
Lt. Governor



Ellington E. Churchill, Jr.  
Secretary

MARYLAND DEPARTMENT OF GENERAL SERVICES  
OFFICE OF THE SECRETARY

September 20, 2018

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

Mr. Ben Grumbles  
Chair, Commission of 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." with a large, stylized flourish at the end.

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**

September 20, 2018

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 the State's Energy Performance Contracting program and renewables purchasing reduces greenhouse gases and other air pollutants. This report shows estimated greenhouse gas reductions for the years 2010 through the 2017 calendar year.

## **DGS Energy Office**

The DGS Office of Energy Performance and Conservation ("Energy Office") performs three 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, and manages a statewide utility tracking database. Beyond these primary functions, the Energy Office also engages in pilot programs, such as retro-commissioning existing State facilities, and fields calls from agencies on various energy-related topics. The following describes each primary function in more detail.

### **Utility Bill Tracking Database**

The Energy Office maintains a statewide utility database that tracks 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, measurement and verification stages of EPCs. It also is an instrumental tool that enables the State to pursue money saving strategies for energy purchasing.

### **Energy Commodities Purchasing**

The Energy Office purchases over \$215 million annually of energy commodities (electricity, natural gas, and bottled gas), using purchasing strategies that in FY17 allowed the State to avoid \$24 million in energy expenses. 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.

- Mount St. Mary's Solar – 13 MW installation, 12,968 MWh/year. Delivery began July 2012

- Roth Rock Wind – 10 MW installation, 30,605 MWh/year. Delivery began August in 2011
- Pinnacle - 55.2 MW installation, 173,542 MWh/year. Delivery began December 2011

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

- 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

As of 2017, the RECs produced by these facilities surpass the State’s RPS requirement.

### Energy Performance Contracting (EPC)

An EPC is a multi-million-dollar construction 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.

### EPC Results

The EPC program, as a whole, has provided considerable cost-effective energy savings and GHG reductions since its inception. Table A below indicates energy savings and CO2 reductions associated with EPC projects since 2010.

**TABLE A**

PROJECT	Construction Completion Date	Overall Annual Energy Reduction MMBTU <sup>1</sup>	Annual CO2 Reduction Tons
DHMH-Spring Grove Hospital	02/01/10	267,504	14,979
University of Baltimore	02/28/10	31,465	2,990
Veterans Affairs	05/31/10	1,999	253
UMCES- Horn Point Lab	10/01/10	12,652	1,253
Work Force Technology Center	12/01/10	14,593	1,421
DGS Buildings	01/01/11	60,730	5,979
MDA-Agriculture	02/01/11	7,618	963

<sup>1</sup> The energy reduction figures are for all fuel sources associated with a project (electricity, natural gas, fuel oil, etc.) converted to millions of Btus. Figures provided by ESCOs in their Phase II proposals as part of their savings guarantee. Actual savings for most projects have been higher.

Department of General Services  
 Greenhouse Gas Reduction/Climate Change Efforts  
 September 20, 2018

<b>State Police</b>	06/30/11	3,683	746
<b>UM College Park- 9 buildings</b>	01/01/12	59,060	3,538
<b>UMCES- Chesapeake Lab</b>	01/01/12	6,154	604
<b>MTA</b>	04/12/12	16,030	2,027
<b>DPSCS- Jessup</b>	06/30/12	224,504	14,412
<b>MdTA</b>	10/18/12	30,712	3,285
<b>Towson Univ. Part 1</b>	12/01/12	32,740	4,139
<b>MAA</b>	12/04/12	119,150	10,965
<b>Bowie State University</b>	01/31/13	6,791	547
<b>UMBC- Part 1</b>	07/31/13	20,855	2,637
<b>UMCP- Athletic Dept.</b>	09/30/13	4,450	555
<b>SHA -I</b>	10/01/13	70,398	7,928
<b>Department of Juvenile Services</b>	1/6/2017	21,852	2,392
<b>MDH Springfield Hospital</b>	7/31/2018	14,557	1,205
<b>MDH Finan Center</b>	1/9/2019	9,557	1,131
<b>MVA</b>	4/1/2018	19,223	2,123
<b>MDH Perkins and Holly Center</b>	6/30/2020	24,679	3,490
<b>DPSCS - WCI &amp; NBCI</b>	TBD	TBD	TBD
	<b>TOTALS</b>	<b>1,189,639</b>	<b>96,086</b>