

Department of Environmental Protection Annual Report on Benchmarking

October 1, 2015

Section 18A-42 of the Benchmarking Law requires the Department of Environmental Protection (DEP) to submit an annual report to the County Executive and County Council on activities related to the Benchmarking Law. Since building energy use accounts for approximately two-thirds of the County's greenhouse gas (GHG) emissions, benchmarking is an important program to help the County achieve its goal of reducing GHG emissions 80 percent by the year 2050.

Status

Implementation of the Benchmarking Law is on-track and progressing smoothly. The Department of General Services (DGS) successfully benchmarked County buildings subject to the law, and disclosed the resulting data to DEP by June 1, 2015, meeting the first deadline in the Benchmarking Law and "leading by example." Summary statistics for the County buildings are provided below.

In spring 2015, DEP piloted an Early Bird Benchmarking recognition program to help familiarize building owners with the reporting process. The County honored 15 Early Birds with a recognition event in September 2015, and will continue to acknowledge early reporting organizations through the end of December 2015. DEP is gearing up for the first compliance season by establishing helpline processes and developing outreach materials. Buildings subject to the law are divided into two groups. Group 1 buildings (250,000 square feet or greater) will report their calendar year 2015 benchmarking data in 2016. Group 2 buildings (50,000 square feet or greater) will report their calendar year 2016 benchmarking data in 2017.

Work Group

Section 2 of the adopted Benchmarking Law provided for the convening of a Benchmarking Work Group, made up of a broad set of stakeholders. The Work Group was charged with reviewing the County's benchmarking process leading up to the deadline to benchmark County buildings by June 1, 2015; and providing recommendations regarding the implementation of the bill within the private sector, including any recommended legislative amendments.

The Work Group met from November 2014 through June 2015. Participants included representatives from utilities, building owners, property managers, nonprofits, associations, and energy service companies. The Work Group email list includes over 350 subscribers, and approximately 50 members participated actively throughout the process.

In order to achieve the objectives assigned to the Work Group, three committees were formed. The Legislative Committee, on behalf of and with the approval of the

full Benchmarking Work Group, compiled a report with several recommended legislative amendments to improve the implementation of the Law. These recommendations have been forwarded to the County Executive and County Council. Introduction is expected in fall 2015. The Technical Assistance and Outreach Committees continue to review benchmarking program materials and assist with building owner outreach.

New Energy Program Manager

To fulfill the duties and responsibilities associated with the Benchmarking Law implementation, DEP brought on an Energy Program Manager I in June 2015. The Energy Program Manager brings years of prior experience with benchmarking, energy management, commercial properties, and outreach, and is focusing efforts on the implementation of the Benchmarking Law.

Compliance Assistance Programming – Education and Outreach

- **In August 2014, DEP published a Benchmarking Law resources website which has since had 1,765 unique views.** See the webpage here: bit.ly/depbenchmarking. DEP has also developed a number of outreach materials that are available for download from the webpage, including the newly developed Frequently Asked Questions document, available here: bit.ly/MoCoFAQs.
- **In November 2014, 125 attendees attended the Introductory Benchmarking Forum.** Hosted by the USGBC-NCR Montgomery County Branch, Green Business Forum/Montgomery County Chamber of Commerce, City of Rockville, and DEP, and included speakers from the U.S. Environmental Protection Agency's ENERGY STAR® Program and Pepco.
- **In February 2015, USGBC-National Capital Region Montgomery County Branch hosted the 2nd Annual Montgomery County Energy Summit with over 200 attendees.** The event featured speakers, including Councilman Roger Berliner, Institute for Market Transformation, DEP staff, EPA ENERGY STAR, and provided one-on-one consultations with utilities and other resources around benchmarking.
- **In April 2015, DEP and Montgomery College's Workforce Development and Continuing Education hosted its first Benchmarking Ambassadors training with nearly 30 attendees.** See a list of them here: bit.ly/May2015Ambassadors. The Ambassadors received training on ENERGY STAR Portfolio Manager® and a primer on the County's benchmarking requirements, and are well-equipped to assist building owners comply with the Law. A second Ambassadors training is scheduled for October 2015.
- **By August 1, 2015 organizations benchmarked and voluntarily reported 60 buildings to the County one year ahead of schedule, as part of an Early Bird Pilot/Recognition Program.** These building represent more

than 12 million square feet and more than 1 trillion Btu of energy. In addition, DGS reported data was reported on County facilities. See a list of Early Birds here: bit.ly/MoCoEarlyBirds. The County Executive, Councilmember Berliner, and DEP honored these Early Birds with a **Recognition Event in September 2015 with nearly 50 attendees**, hosted by the Montgomery County Chamber of Commerce.

- DEP and Montgomery College's Workforce Development and Continuing Education have explored workforce development course offerings to help building owners meet the verification requirement of the Benchmarking Law. From an informal survey of building owners, many Group 1 buildings have the verification expertise in-house or available by an energy services contract. Thus, DEP believes that developing a course offering at this time would be premature, but is targeting spring 2017 to offer a course for the Group 2 building owners.

Partnerships

DEP's outreach efforts would not be possible without the ongoing and proactive support of several instrumental partners. In addition to sharing information with their networks and membership, they have contributed in the Work Group process, providing valuable information to DEP in developing our programming:

- Apartment and Office Building Association (AOBA)
- Utilities and energy providers, namely Pepco, Baltimore Gas and Electric, Washington Gas, and Potomac Energy and their energy efficiency programs
- U.S. Environmental Protection Agency's ENERGY STAR Program
- Building owners and managers representing significant building infrastructure in the County
- Energy service providers, providing benchmarking and other energy efficiency services and products in the County
- Chambers of Commerce, including the Montgomery County Chamber of Commerce and the local chambers
- National technical assistance and research organizations such as the Institute for Market Transformation, Consortium of Building Energy Innovations, U.S. Department of Energy, Lawrence Berkeley National Laboratories, Natural Resource Defense Council, and peer jurisdictions with similar benchmarking and transparency laws.

Energy Summary Statistics of County Buildings

By the June 1, 2015 deadline, DGS benchmarked and disclosed data for 15 County buildings. These buildings are located in Aspen Hill, Bethesda, Gaithersburg, Germantown, Rockville, and Silver Spring and have the following Portfolio Manager

use types: office, library, courthouse, performing arts, social/meeting hall, and other-public service. Below is a summary of reported data:

Table 1: Summary of Calendar Year 2014 Data for the Montgomery County Buildings

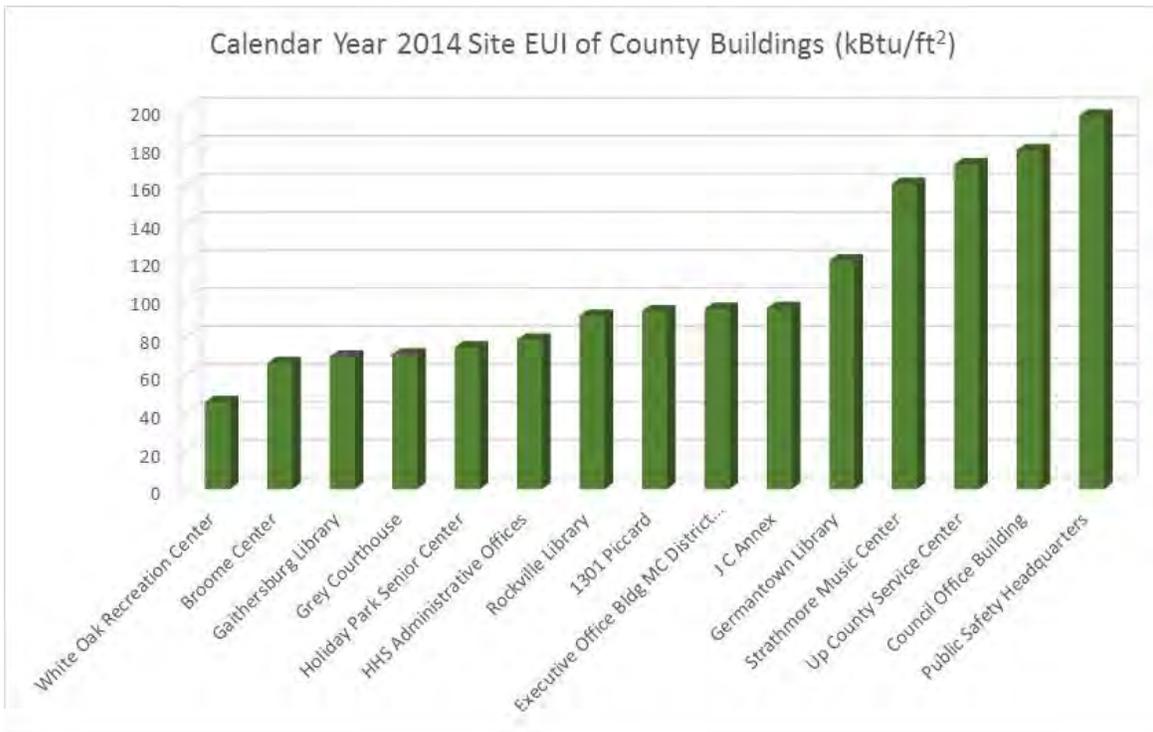
Data Point	County Building Data Summary
Number of Buildings Reported	15
Total Square Footage	2,173,755
Total Electricity Use (kWh)	48,175,604
Total Natural Gas Use (therms)	911,043
Total Other Energy Use (kBtu)	2,628,072
Total Site Energy Use (kBtu)	258,858,194
Total Source Energy Use (kBtu)	615,240,111
Total GHG Emissions (MTCO _{2e})	27,135
Average Site EUI (kBtu/ft ²)	107
Average Source EUI (kBtu/ft ²)	253
Average ENERGY STAR Score	45

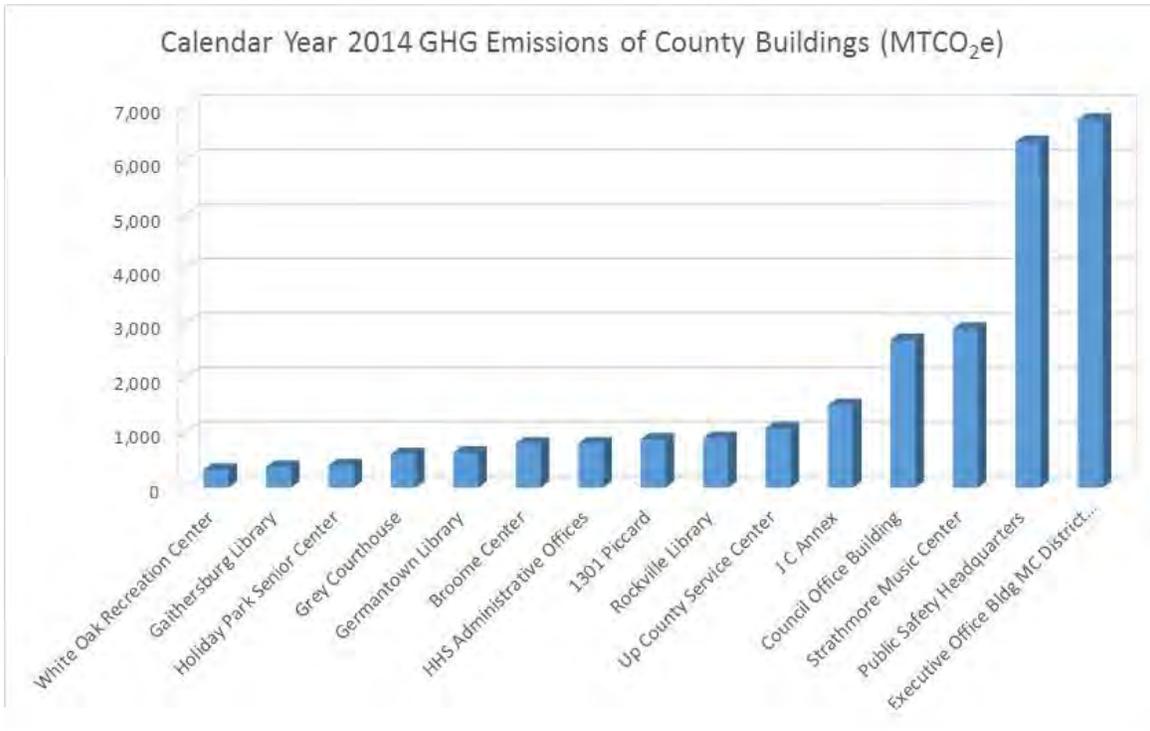
Per 18A-42(a)(3)(A) of the Benchmarking Law, this annual report also includes the ENERGY STAR scores of the County buildings that are benchmarked. Please note that not all building use types are eligible to earn the ENERGY STAR label. Many factors can impact ENERGY STAR scores including building operations, occupant behavior and data quality. DGS has acknowledged some metering and billing issues that may impact data quality, and thus, the County's ENERGY STAR scores.

Table 2: County Building Energy Use Intensity and ENERGY STAR Scores

County Building	Site EUI	Source EUI	ENERGY STAR Score	Notes
White Oak Recreation Center	45.8	143.7	N/A	Use type cannot earn an ENERGY STAR score
Broome Center	66.4	132.4	79	
Gaithersburg Library	67.9	177.0	N/A	Use type cannot earn an ENERGY STAR score
Grey Courthouse	70.9	149.5	42	
Holiday Park Senior Center	74.6	153.3	N/A	Use type cannot earn an ENERGY STAR score
HHS Administrative Offices	78.7	228.2	86	
Rockville Library	91.2	198.9	N/A	Use type cannot earn an ENERGY STAR score
1301 Piccard	93.6	226.8	61	
Executive Office Bldg. MC District Court	94.8	283.3	34	As of October 2015, DGS is revising the data for this facility to a more

County Building	Site EUI	Source EUI	ENERGY STAR Score	Notes
				granular building level.
J C Annex	95.3	193.0	70	
Germantown Library	120.3	301.4	N/A	Use type cannot earn an ENERGY STAR score
Strathmore Music Center	160.6	335.8	N/A	Use type cannot earn an ENERGY STAR score
Up County Service Center	170.9	384.6	13	
Council Office Building	178.3	476.8	8	
Public Safety Headquarters	196.5	405.0	15	





The County's covered buildings comprise a variety of use types with unique challenges when it comes to energy savings. DGS is launching new initiatives to reduce energy consumption in its facilities. Specifically, DGS has launched an extensive energy performance contracting initiative with 12 buildings under either a preliminary or investment grade audit. The County's recently completed work at the Department of Health and Human Services Administrative Building at 401 Hungerford Drive, for example, reduced energy consumption 27 percent, resulting in an ENERGY STAR score of 89. DGS expects comparable results from subsequent projects and will pursue ENERGY STAR building labels where appropriate.

To help manage energy use in the County's building portfolio, DGS has also contracted with EnergyCAP to implement advanced utility bill analysis and tracking. Under this initiative, DGS will increase its surveillance of energy issues in County facilities on an ongoing basis, expanding energy savings. The software will also automatically export energy performance data to Portfolio Manager, enabling the benchmarking all major facilities and increasing the number of benchmarked facilities in the region.

DGS and DEP will continue to track lessons learned from these initiatives that can benefit the private sector. Moving forward, DEP will continue to partner with DGS to leverage benchmarking data to identify new opportunities for energy efficiency investments and improvements. DGS and DEP will coordinate to disclose benchmarked data in CountySTAT, the open data website created under Section 2-154 of the County Code. The County will continue to meet the requirements of the Benchmarking Law and strive for improved energy savings in its facilities.