

Montgomery County Department of Environmental Protection Annual Report on Benchmarking

January 2018

Section 18A-42 of the Montgomery County Code requires the Department of Environmental Protection (DEP) to submit an annual report to the County Executive and County Council on activities related to the County's 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 ambitious goal of reducing GHG emissions while helping building owners identify energy- and cost-saving opportunities. This report summarizes benchmarking data representing calendar year 2016 data reported to the County.

Status

Implementation of the Benchmarking Law is on-track and progressing smoothly. DEP was well prepared for this compliance season due to the technical support and data management processes established in the prior compliance year. DEP also continues to refine and improve outreach materials based on feedback received from building owners.

The Department of General Services (DGS) successfully benchmarked County buildings subject to the law for the third year in a row, disclosing the resulting calendar year 2016 data to DEP by the June 1, 2017 deadline. Group 1 buildings (privately owned buildings 250,000 square feet or greater) subject to the law successfully benchmarked and reported their calendar year 2016 benchmarking data by June 1, 2017, and will report energy use in subsequent years each June 1st.

Summary statistics for the public County buildings and private Group 1 buildings are provided in this report, and a spreadsheet of detailed building-level information is available for download from DEP's website here: bit.ly/mc2016data.¹

Group 2 buildings (privately owned buildings 50,000 square feet or greater) reported their calendar year 2016 benchmarking data by June 1, 2017 and will annually thereafter each June 1st. Aggregated summary statistics on Group 2 buildings are available at the end of this report. Detailed building-level data on Group 2 buildings will be published after the second year of reporting in October 2018. DEP is working closely with CountyStat to present benchmarking data of the County buildings, as well as the Group 1 and Group 2 buildings, using the dataMontgomery platform by FY 2018 in accordance with the schedule established by CountyStat.

¹ A glossary of terms used in the spreadsheet is also available for download from DEP's website here: bit.ly/aboutmcbfields.

Generally, DEP has found private building owners to be receptive of and responsive to the Benchmarking Law requirements. Many continue to express understanding of the law's intent, and satisfaction with the County's technical assistance and available resources.

Positive interactions between DEP and building owners through the Benchmarking Law give DEP the opportunity to encourage building owners to explore projects to reduce energy consumption, take advantage of the utility EmPOWER incentives, and consider energy finance tools for building upgrades such as Commercial Property Assessed Clean Energy (C-PACE) financing or offerings from the Montgomery County Green Bank.

City Jurisdictions Opting Into the Benchmarking Law

In July 2016, the City of Rockville opted into the County's Benchmarking Law, which added an additional 150 buildings to the inventory of buildings subject to the Law. DEP assisted with education and outreach to owners of buildings 50,000 square feet and greater in the City of Rockville, and implements the Law with the same level of effort as unincorporated portions of the County.

The City of Gaithersburg is in the process of opting into the Benchmarking Law. On December 4, 2017, the City approved the introduction of an ordinance to amend the city code to opt into the Law. A public hearing on the amendment to the city code was held on January 2, 2018. If the City of Gaithersburg adopts the Law, it will add approximately 120 buildings to the inventory of buildings subject to the Law. DEP staff will provide the same level of support to the City of Gaithersburg as they did for the City of Rockville.

The Benchmarking Law already applies in the City of Takoma Park. Some smaller towns in the County have not opted into the law (e.g., Somerset, Kensington, Chevy Chase Village), but it is estimated that only about 20 commercial buildings would be required to benchmark in these municipalities.

Compliance Assistance Programming – Education and Outreach

- As of **December 2017, DEP has more than 1,900 subscribers to its monthly Commercial Energy News email newsletter.** The newsletter—along with DEP's Facebook and Twitter social media platforms and a dynamic Google Group forum with more than 110 members—have proven to be effective ways to keep building owners and other stakeholders abreast of Benchmarking Law deadlines, news, and available resources.
- As of **October 2017, DEP has had 5,256 unique views of the Benchmarking Law website in the last 12 months, and 9,602 unique views since the website's launch in August 2014.** See the webpage here: bit.ly/bbmontco. DEP has also developed a comprehensive offering of outreach resources that are available for download from the website,

including the Official Guide for Benchmarking in Montgomery County (bit.ly/mcbbguide) and an in-depth guide on how to complete the data verification requirement (bit.ly/mcbbverify).

- **In December 2016, DEP launched a pro bono benchmarking and data verification pilot program that assisted seven non-profit building owners with compliance.** DEP thanks the Benchmarking Ambassadors who volunteered their time to help these building owners benchmark their energy use and understand the reporting requirements at no cost. Additional details about this pilot program are available on page 17.
- **In January 2017, DEP sent over 1,800 letters during a direct-mail outreach campaign to notify Group 2 building owners and property managers about the Benchmarking Law.** DEP prepared letters for each Group 2 building address and included DEP’s benchmarking brochure (bit.ly/aboutmccb), a step-by-step checklist for compliance (bit.ly/depbchecklist), and a selected case study that profiles a County building owner’s best practices and lessons learned about the benchmarking process (see all of the profiles here: bit.ly/mcbbprofiles).
- **In February 2017, DEP sent an additional 2,400 emails to Group 2 building owners and managers** to follow-up on the direct-mail outreach campaign. By contacting building owners through multiple communication channels, DEP expanded our reach to ensure covered building owners were aware of the law requirements and the resources available to help them benchmark.
- **In April 2017, USGBC-National Capital Region Montgomery County Branch hosted the 4th Annual Montgomery County Energy Summit with over 250 attendees.** DEP partnered with USGBC-National Capital Region on this annual event that features in-depth workshops on commercial building energy-efficiency and renewable energy topics, keynote speakers, an exhibitor hall, and networking opportunities. Through this event, DEP connected with building owners about the commercial energy programs in the County and broadcast reminders about the upcoming June 1st benchmarking deadline. A summary of the event can be found here: bit.ly/DEPenergysummit2017. The next Montgomery County Energy Summit is scheduled for Wednesday, April 4, 2018.
- **In August 2017, DEP sent nearly 250 Notice of Failure to Comply letters to Group 1 and Group 2 building owners who did not comply with the law by June 1, 2017.** In many cases, the building owner was simply unaware of the law or actively working with tenants and the energy utilities to obtain building data—these building owners have been in contact with DEP and are working to come into compliance. Other cases stem from outdated or incorrect building information from the property tax records or CoStar (e.g., actual gross square footage puts the property below the 50,000 Group 2 square footage threshold) which will be corrected in DEP’s next iteration of the Private Buildings Inventory.

- **Each month, DEP continues to offer in-person office hours** for building owners, property managers, tenants, and other interested parties to learn about the Benchmarking Law and ask specific questions about their properties. DEP anticipates holding monthly office hours through December 2017 and quarterly office hours in 2018.

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 continue to provide valuable information to DEP in developing the County's programming:

- U.S. Department of Energy (DOE) and Lawrence Berkeley National Laboratory, in conjunction with the Standard Energy Efficiency Data (SEED) Platform Collaborative network
- U.S. Green Building Council – National Capital Region (USGBC-NCR)
- Apartment and Office Building Association (AOBA)
- Utilities and energy providers, namely Pepco, Baltimore Gas and Electric, Washington Gas, and Potomac Edison, as well as the energy efficiency programs of each of these utilities
- U.S. Environmental Protection Agency's (EPA'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, Natural Resource Defense Council, and peer jurisdictions with similar benchmarking and transparency laws.

Energy Summary Statistics of County Buildings

By the June 1, 2017 deadline, DGS benchmarked and disclosed data for the 14 applicable Montgomery County Government buildings 50,000 square feet or greater for the third year.² The County buildings are located in Aspen Hill, Bethesda, Gaithersburg, Germantown, Rockville, and Silver Spring and have the following

² County has 15 public buildings applicable under the law, however a waiver has been applied to the Grey Courthouse due to low occupancy during CY 2016 (less than 50%). The Broome Center was reported in the County's first report of CY 2014 data but has since been converted into warehouse space, and thus is now exempt from the Benchmarking Law.

Portfolio Manager use types: office, library, courthouse, performing arts, social/meeting hall, and other-public service.

Summary statistics for the County buildings appear in Table 1 below, and detailed building-level information for calendar year 2016 is available for download from DEP's website here: bit.ly/mc2016data.³

Table 1: Summary of Calendar Year 2016 Data for the Montgomery County Buildings

Data Point	County Building Data Summary
Number of Buildings Reported	14
Total Square Footage	1,979,147
Total Electricity Use (kWh)	45,626,954
Total Natural Gas Use (therms)	917,845
Total Fuel Oil #2 Use (kBtu)	0
Total Site Energy Use (kBtu)	249,872,436
Total Source Energy Use (kBtu)	587,639,207
Total GHG Emissions (MTCO _{2e})	22,907
Average Site EUI (kBtu/ft ²)	110
Average Source EUI (kBtu/ft ²)	258
Average ENERGY STAR Score	49

Per the Benchmarking Law [Section 18A-42(a)(3)(A) of the County Code], this annual report also includes the ENERGY STAR scores of the County buildings that are benchmarked, as well as site and source energy use intensity (EUI). An ENERGY STAR score is a 1 – 100 rating serves as a screening tool that helps assess how a building is performing, with a score of 50 being the median for each building type. Site EUI is the energy used in a building per square foot during the reporting period, which expresses a building's energy use in terms of its regular operation. Source EUI, however, represents the total amount of energy required to operate the building per square foot during the reported period, including all energy transmission, delivery, and production losses. EPA has determined that source energy is the most equitable unit for evaluation.

Table 2: County Building Energy Use Intensity and ENERGY STAR Scores for Calendar Year 2016 (in ascending order by source EUI)

County Building	Site EUI	Source EUI	ENERGY STAR Score	Notes
Gaithersburg Library	31.2	43.8	N/A	Use type cannot earn an ENERGY STAR score. Facility was LEED Gold certified in

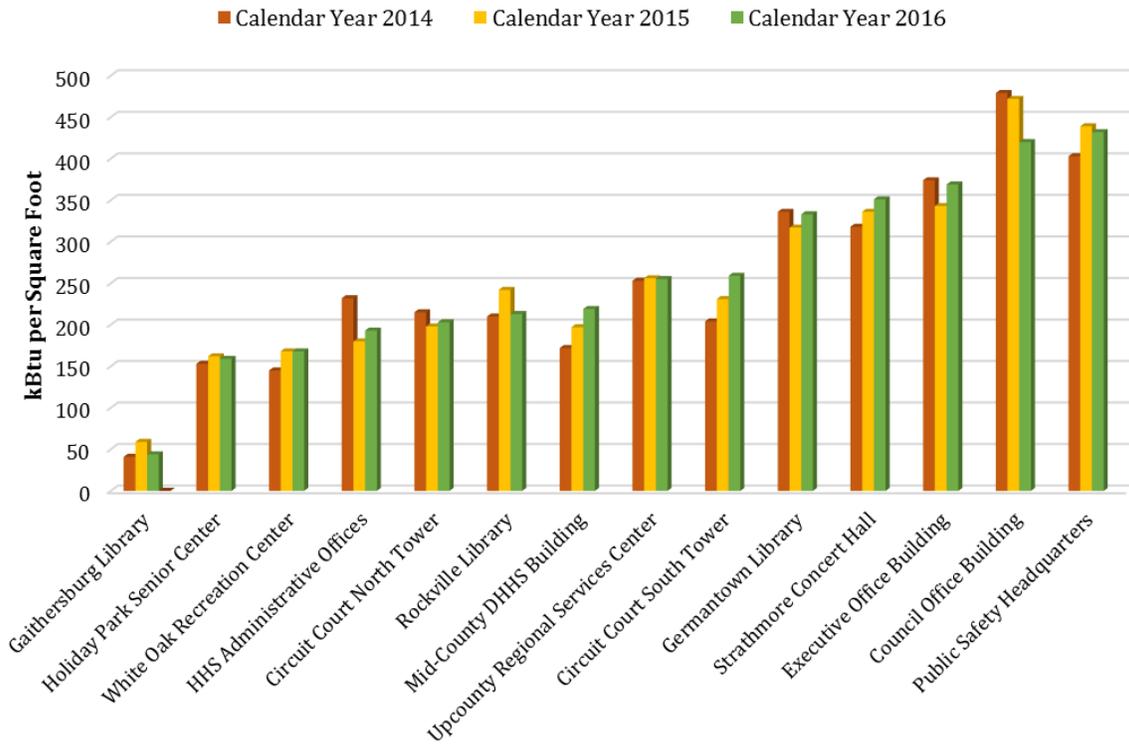
³ A glossary of terms used in the spreadsheet is also available for download from DEP's website here: bit.ly/aboutmcbfields.

County Building	Site EUI	Source EUI	ENERGY STAR Score	Notes
				2015 (<i>LEED BD+C: New Construction v2</i>).
Holiday Park Senior Center	77.3	158.9	57	Facility scheduled for upgrade via Energy Savings Performance Contracting in FY 2018.
White Oak Recreation Center	54.9	168.0	N/A	Use type cannot earn an ENERGY STAR score. Facility was LEED Gold certified in 2013 (<i>LEED BD+C: New Construction v2</i>).
Health and Human Services (HHS) Administrative Offices	78.0	192.7	84	Facility renovated under Energy Savings Performance Contracting. Projected annual energy and operational savings exceed \$200k; total capital cost of \$4.1M.
Montgomery County Circuit Court North Tower	68.4	202.9	66	County targeted for walk-through assessment "Energy Sweeps" to identify energy and operational savings opportunities.
Rockville Library	98.2	212.5	N/A	County completed walk-through assessment "Energy Sweep" - suggested energy and operational savings opportunities. Use type cannot earn an ENERGY STAR score.
Mid-County Department of Health and Human Services (DHHS) Building	87.0	218.7	84	Facility renovated under Energy Savings Performance Contracting in FY 2018.
Upcounty Regional Services Center	112.0	255.1	41	Facility scheduled for upgrade via Energy Savings Performance Contracting in FY 2018.
Montgomery County Circuit Court South Tower	133.2	258.8	41	Facility was LEED Gold certified in 2015 (<i>LEED BD+C: New Construction v2</i>).

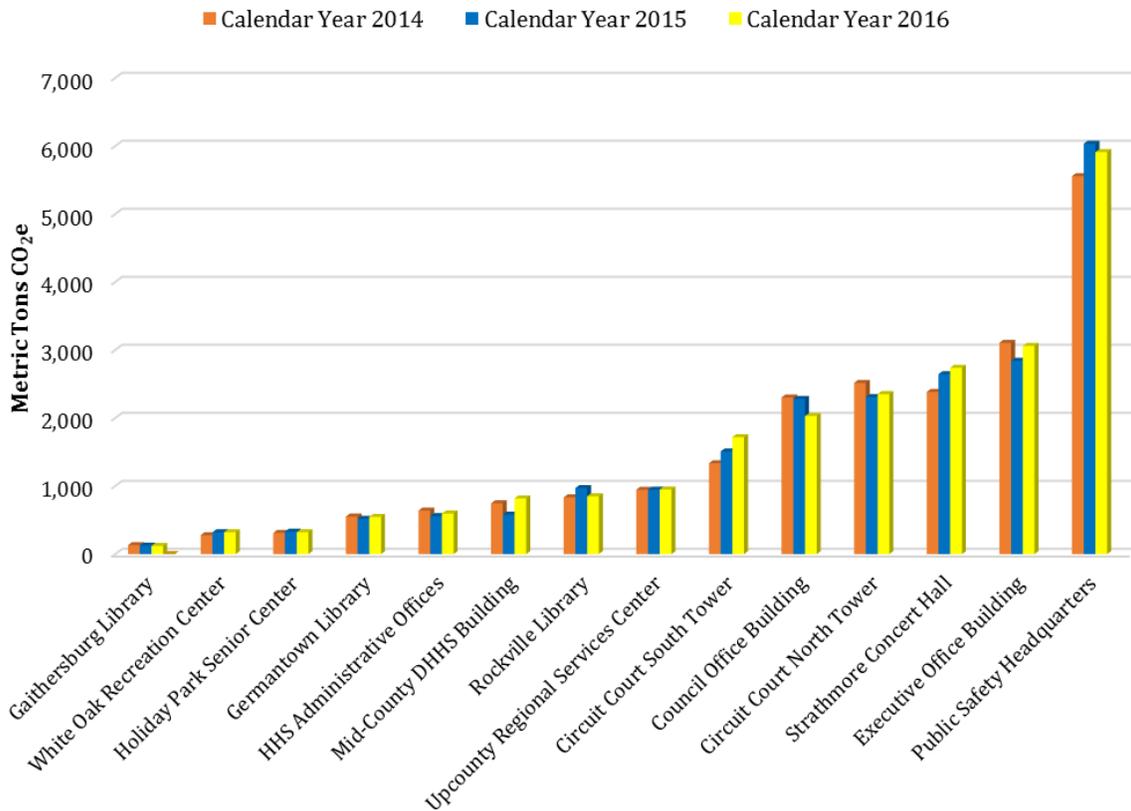
County Building	Site EUI	Source EUI	ENERGY STAR Score	Notes
Germantown Library	132.0	333.3	N/A	Use type cannot earn an ENERGY STAR score.
Strathmore Concert Hall	181.2	351.3	N/A	Facility completed a comprehensive energy efficient lighting retrofit in fall 2016 and HVAC equipment was replaced in summer 2017. Use type cannot earn an ENERGY STAR score.
Executive Office Building	117.4	368.8	19	Facility completed a comprehensive energy efficient lighting retrofit on 11 th floor in spring 2017. Facility utility metering partially overlaps with Montgomery County Circuit Court North Tower.
Council Office Building	160.5	419.7	18	Facility scheduled for upgrade via Energy Savings Performance Contracting in FY 2019.
Public Safety Headquarters	204.6	432.3	29	Facility scheduled for upgrade via Energy Savings Performance Contracting in FY 2018. Facility is also a part of the County's microgrid project.

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.

Source Energy Use Intensity of County Buildings



Total GHG Emissions of County Buildings



DGS has implemented, coordinated by its Office of Energy and Sustainability, comprehensive strategies to manage energy in and improve the sustainability of County Government facilities. Initiatives include:

Data and Energy Management:

- Implemented cutting-edge energy data management software that allows County staff to:
 - Transfer utility data into EPA's ENERGY STAR Portfolio Manager benchmarking tool, expanding the number of public facilities benchmarked;
 - Capture and resolve utility bill errors, saving the County nearly \$100k since July 2016;
 - Analyze utility consumption to better predict and budget County utility expenses;
 - Identify high-value facilities for "Energy Sweeps," the County's program for identifying no-cost/ low-cost energy and operational savings opportunities at existing buildings;
 - Monitor and verify County LEED facilities and implemented energy and operational savings resulting from Energy Sweeps and Energy Savings Performance Contracting efforts;
- Hired an Energy Program Manager and Energy Technician position to monitor energy use, identify energy saving opportunities, and implement action plans to reduce consumption.

High Performance Green Building Design:

- To date, the County has achieved Silver or Gold certification for 14 facilities under the U.S. Green Building Council's LEED rating system. This includes the recently constructed Gaithersburg Library, White Oak Community Recreation Center, and Montgomery County Circuit Court South Tower.

Energy Savings Performance Contracting:

- Leveraged energy savings performance contracting to upgrade County facilities and guarantee savings. For example; the County implemented energy and operational savings measures on the HHS Administrative Offices, reducing energy consumption by 27 percent. Other facilities scheduled for energy savings performance contracting through FY 2018 include: Mid-County DHHS Building, Upcounty Regional Services Center, Council Office Building, and the Public Safety Headquarters.
- Implemented lighting and other energy savings measures to the Brookville Maintenance Depot, Strathmore Concert Hall, and Executive Office Building.

Renewables and Clean Energy:

- Implementing over 11 megawatts (MW) of solar in County facilities by the end of FY 2018. Currently, DGS has completed 10 facilities with another three scheduled by the end of FY 2018.

- Purchasing clean energy to account for 100 percent of the County’s building electricity consumption, as well as to cover emissions from building natural gas and fuel oil use.
- Completed installation the County’s first combined heat and power system (CHP) in June 2016, efficiently converting natural gas to heat and electricity for its Pre-Release Center in Rockville. The gas-powered 65 kW CHP system will generate electricity, and the heat recovered from the micro turbine exhaust will be used to produce hot water that is distributed for space- and water-heating at the 171-bed facility

Grants and Utility Incentives:

- Received over \$2M in Maryland Energy Administration grants and \$1.4M in utility incentives.

DGS will continue to share lessons learned from these initiatives with other government agencies and the private sector. The County will continue to fulfill its obligations under the Benchmarking Law and expand efforts to implement energy-saving initiatives across County facilities.

Private Covered Buildings Inventory

In October 2016, DEP released a revised Private Covered Buildings Inventory to raise awareness about the Benchmarking Law and assist building owners with identifying buildings covered under the Law. The data for this inventory are sourced from current Maryland tax assessment records and the CoStar commercial building database. DEP will continue to update this inventory regularly.

While each building owner must determine whether their building is covered under the Law, this inventory serves as DEP’s preliminary tool to track and determine compliance rates. Due to a variety of factors, the building data supplied by state tax assessment records and CoStar are imperfect and/or outdated. Thus, in the initial years of Benchmarking Law compliance, DEP’s identification of noncompliant building owners and estimation of compliance rates are also imperfect. As DEP begins to receive actual building data in the coming years, compliance rates are expected to become more accurate.

Energy Summary Statistics of Private Group 1 Buildings

During the first compliance period of the Benchmarking Law, DEP anticipated that 101 private Group 1 buildings would be benchmarked based on the October 2016 version of the Private Covered Building Inventory. However, DEP’s actual inventory of Group 1 buildings continues to adapt and expand over time as additional building owners report benchmarking data; as of September 2017, the total Group 1 building inventory is approximately 167, when accounting for exemptions and waivers.

Building owners benchmarked and disclosed 125 buildings that fall into the Group 1 category based on square footage. During the compliance period, one Group 1 building qualified for an exemption and two Group 1 buildings were granted waivers, per the conditions specified in the legislation. Many Group 1 exemptions that DEP granted for the 2015 benchmarking year applied in 2016 as well. Group 1 buildings that submitted a complete benchmarking report or completed an exemption or waiver form have been deemed compliant.

Summary statistics for the Group 1 buildings appear in Table 3 below, and detailed building-level information for calendar year 2016 is available for download from DEP’s website here: bit.ly/mc2016data.⁴

Table 3: Group 1 Building Reporting Summary (As of December 2017)

Building Category	Number of Buildings	
	CY 2015 Data	CY 2016 Data ⁵
Group 1 Buildings in Covered Building Inventory ⁶	142	167
Group 1 Buildings that Submitted Benchmarking Reports	93	125
Group 1 Buildings that Applied for Exemptions	16	1
Group 1 Buildings that Applied for Waivers	14	2
Group 1 Buildings that Submitted Incomplete Reports	7	4
Group 1 Buildings that Have Not Complied ⁷	12	28
Compliance Rate of Covered Group 1 Buildings	87%	77%

In Table 3 above, while the number of buildings in the Covered Building Inventory and the number of buildings submitting benchmarking reports increased, the overall compliance rate this year is slightly lower than last year. This is due to a number of factors including: changes in building ownership causing outstanding

⁴ A glossary of terms used in the spreadsheet is also available for download from DEP’s website here: bit.ly/aboutmcbfields.

⁵ Note that CY 2016 data in this report include summary data for the City of Rockville Group 1 buildings, but individually attributable benchmarking information from the City’s first required year of reporting are not disclosed in the detailed building-level data spreadsheet available for download from DEP’s website.

⁶ This number includes private buildings, Montgomery County Public Schools buildings, and Montgomery College buildings that are 250,000 square feet and greater. The total number of Group 1 buildings in the inventory increased from 2015 to 2016 due to new building construction, improved granularity of Montgomery College’s building reporting, and DEP’s refinement of the Private Covered Building Inventory.

⁷ Group 1 Buildings that have not yet complied are based on DEP’s original Private Covered Building Inventory. Due to the inaccuracies that DEP has found thus far in tax records and CoStar, this figure may be modified in the future due to: buildings that do not need to comply in the Group 1 category due to erroneous square footage (i.e., below 250,000 square feet), buildings that may qualify for an exemption or waiver, or buildings that are not yet constructed but land is zoned for commercial use.

benchmarking reports, waivers and exemptions not submitted annually as requested by DEP, and improvements made in the Covered Building Inventory such as removing exempt building types. While achieving a 100% compliance rate is rarely seen in other jurisdictions with similar benchmarking laws, DEP aims to improve our rates by providing technical assistance and guidance to building owners.

As of December 2017, DEP is continuing to work with building owners that submitted incomplete benchmarking data reports, as well as the building owners who received Notice of Failure to Comply letters and need to come into compliance.

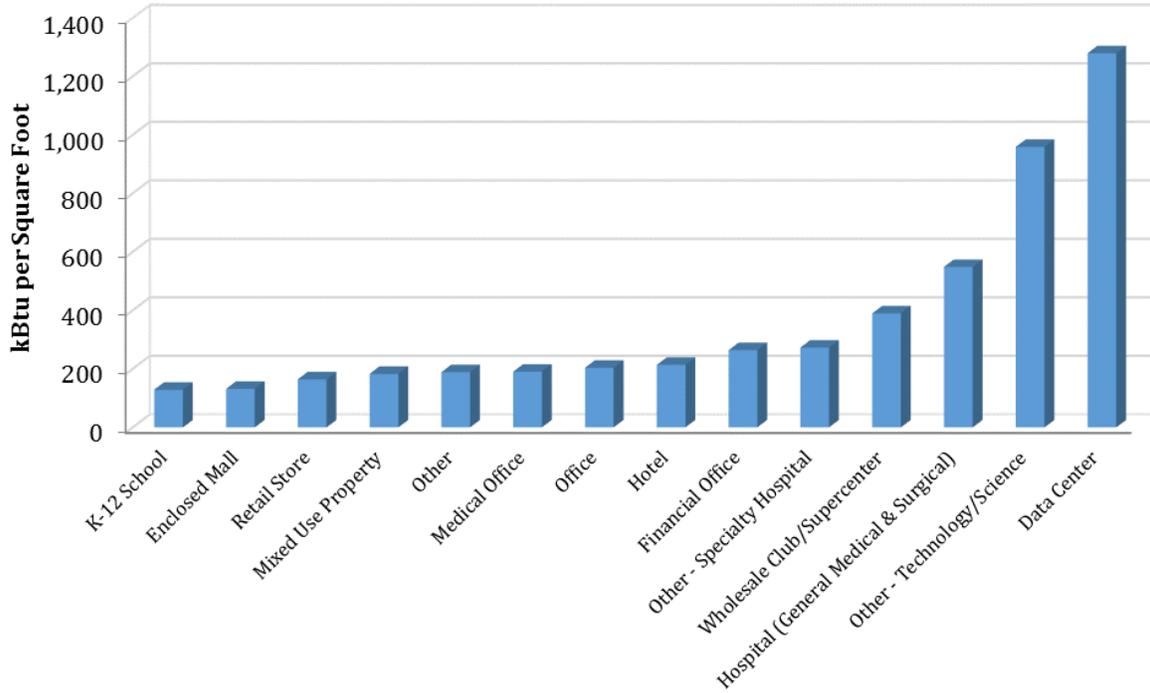
In addition to the Group 1 buildings' benchmarking data, DEP also received benchmarking reports for buildings not covered by the Law that are 250,000 square feet and greater properties. These properties include some large Montgomery County Public Schools and Montgomery College buildings, as well as buildings located in jurisdictions that have not opted into the Law. The benchmarking data for MCPS and Montgomery College buildings 250,000 square feet and greater, as well as the covered Group 1 buildings, are aggregated and summarized in Table 4 below. Data from buildings located in jurisdictions that have not opted into the Benchmarking Law are not included in DEP's statistics.

Table 4: Aggregated Summary of Calendar Year 2016 Data for Buildings 250,000 Square Feet and Greater that Reported Data to DEP

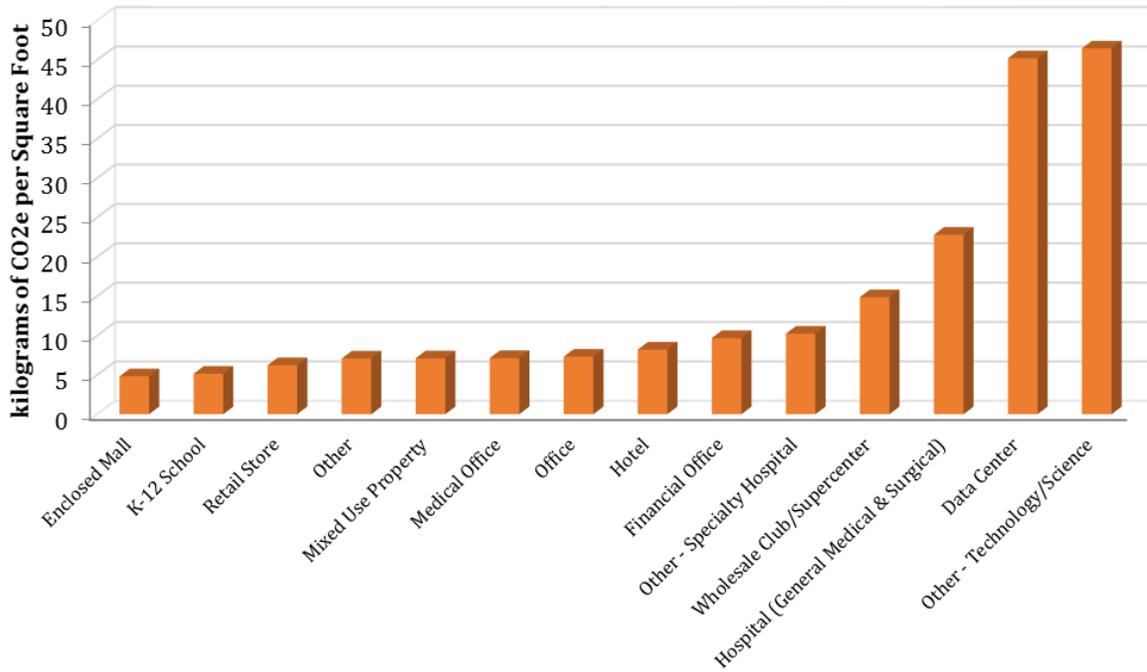
Data Point	CY 2016 Building Data Summary
Number of Buildings Reported	125
Total Square Footage	32,418,336
Total Electricity Use (kWh)	622,854,512
Total Natural Gas Use (therms)	8,069,817
Total Other Energy Use (kBtu) ⁸	14,616,563
Total Site Energy Use (kBtu)	3,063,796,234
Total Source Energy Use (kBtu)	7,666,999,821
Total GHG Emissions (MTCO _{2e})	299,730
Average Site EUI (kBtu/ft ²)	95
Average Source EUI (kBtu/ft ²)	237
Average ENERGY STAR Score	71

⁸ Other Energy Use includes fuel oil, diesel, kerosene, propane, district steam, district hot water use, and district chilled water use.

Calendar Year 2016 Source Energy Use Intensity of Group 1 Buildings by Building Type



Calendar Year 2016 GHG Emissions Intensity of Group 1 Buildings by Building Type



Energy Summary Statistics of Private Group 2 Buildings

During the first compliance period for Group 2 buildings covered by the Benchmarking Law, DEP anticipated that 696 buildings would be benchmarked based on the October 2016 version of the Private Covered Building Inventory. However, DEP’s actual inventory of Group 2 buildings continues to adapt and expand over time as additional building owners report benchmarking data and corrections to the building inventory; as of September 2017, the total Group 2 building inventory is approximately 741, when accounting for exemptions and waivers.

Private building owners benchmarked and disclosed 375 buildings that fall into the Group 2 category based on square footage. During the compliance period, 15 Group 2 buildings qualified for exemptions and 15 Group 2 buildings were granted waivers, per the conditions specified in the legislation. Group 2 buildings that submitted a complete benchmarking report or completed an exemption or waiver form have been deemed compliant. As of December 2017, DEP is continuing to work with building owners that submitted incomplete benchmarking data reports, as well as the building owners who received Notice of Failure to Comply letters and need to come into compliance.

Table 5: Group 2 Building Reporting Summary

Building Category	Number of Buildings
Group 2 Buildings on Covered Building Inventory ⁹	741
Group 2 Buildings that Reported CY 2016 Data	375
Group 2 Buildings that Applied for Exemptions	15
Group 2 Buildings that Applied for Waivers	15
Group 2 Buildings that Submitted Incomplete Reports	39
Group 2 Buildings that Have Not Complied ¹⁰	257
Compliance Rate of Covered Group 2 Buildings	55%

In addition to the Group 2 buildings’ benchmarking data, DEP also received complete benchmarking reports for buildings not covered by the Law that are between 50,000 square feet and 250,000 square feet. These properties include some large Montgomery County Public Schools and Montgomery College buildings, as well as buildings located in jurisdictions that have not opted into the Law. The benchmarking data for MCPS and Montgomery College buildings 50,000-249,999

⁹ This number includes private buildings, Montgomery County Public Schools buildings, and Montgomery College buildings that are between 50,000 square feet and 249,999 square feet.

¹⁰ Group 2 Buildings that have not yet complied are based on DEP’s Private Covered Building Inventory. Due to the inaccuracies that DEP has found thus far in tax records and CoStar, this figure may be modified in the future due to: buildings that do not need to comply in the Group 2 category due to erroneous square footage (i.e., below 50,000 square feet), buildings that may qualify for an exemption or waiver, or buildings that are not yet constructed but land is zoned for commercial use.

square feet, as well as the covered Group 2 buildings, are aggregated and summarized in Table 6 below. Data from buildings located in jurisdictions that have not opted into the Benchmarking Law are not included in DEP's statistics.

Table 6: Aggregated Summary of Calendar Year 2016 Data for Buildings 50,000 Square Feet up to 250,000 Square Feet that Reported Data to DEP

Data Point	CY 2016 Building Data Summary
Number of Buildings Reported and Verified	375
Total Square Footage	41,958,134
Total Electricity Use (kWh)	803,035,423
Total Natural Gas Use (therms)	9,138,940
Total Other Energy Use (kBtu) ¹¹	362,857
Total Site Energy Use (kBtu)	3,663,109,094
Total Source Energy Use (kBtu)	9,582,389,203
Total GHG Emissions (MTCO _{2e})	381,559
Average Site EUI (kBtu/ft ²)	87
Average Source EUI (kBtu/ft ²)	228
Average ENERGY STAR Score	65

Verification Requirement

Montgomery County and the city of Chicago are the only two jurisdictions with benchmarking and transparency laws that require verification. Verification ensures that building and energy data entered into Portfolio Manager are correct and that building owners are making energy conservation decisions based on accurate information. To comply with the verification requirement, building owners can have their data reviewed by a Recognized Data Verifier—a professional who holds one of 23 acceptable credentials recognized by the DEP Director—or have ENERGY STAR Certification for at least six months of the year being verified.

Data verification is required the first year that a building's benchmarking data is reported to the County and every third year thereafter. The table below summarizes the credentials reported for Recognized Data Verifiers that completed data verification for Group 2 buildings this compliance. Verification information for buildings that reported data in the previous year are not included in the table below.

¹¹ Other Energy Use includes fuel oil, diesel, kerosene, propane, district steam, district hot water use, and district chilled water use.

Table 7: Summary of Calendar Year 2016 Group 2 Building Verification Credentials

Verification Credential	Number of Group 2 Buildings Verified
Professional Engineer (PE)	161
Certified Energy Manager (CEM)	88
LEED AP O+M	36
Certified Energy Auditor (CEA)	13
Commissioning Process Management Professional (CPMP)	11
Registered Architect (RA)	10
ENERGY STAR Certification	8
Licensed Architect	6
Certified Facility Manager (CFM)	4
Certified Measurement & Verification Professional (CMVP)	4
Real Property Admin (RPA)	3
Certified Property Manager (CPM)	2
Certified Building Commissioning Pro (CBCP)	2
Systems Maintenance Administrator (SMA)	1
Systems Maintenance Technician (SMT)	1
Total Group 2 Buildings Verified¹²	350

The U.S. Green Building Council-National Capital Region is offering a LEED AP O+M prep course in February 2018, which will give building owners an opportunity to earn an acceptable credential to meet the verification requirement in future years. As a board member of the National Capital Region’s Market Leadership Advisory Board, the Commercial Energy Program Manager will work with USGBC and other members to promote this course and seek to offer similar courses as needed. DEP and Montgomery College’s Workforce Development and Continuing Education have also explored developing a customized workforce development course offering to help building owners meet the verification requirement of the Benchmarking Law. DEP will continue to evaluate the demand for offering this course in advance of the next reporting cycle for the verification requirement.

Pro Bono Benchmarking and Verification Pilot Program

In December 2016, DEP launched a pilot program to offer pro bono benchmarking and verification services to the County’s non-profit building owners who needed to comply with the Benchmarking Law. DEP connected non-profit building owners with one of nine Benchmarking Ambassadors who were willing to donate their time and benchmarking and/or data verification skills. The program was offered on a first-come first-serve basis, and organizations that received pro bono assistance are transparently listed on our website and in this report. DEP is immensely grateful for

¹² Twenty-five Group 2 buildings reported verification details during the calendar year 2015 benchmarking data collection, which are not included in this table.

the volunteer Ambassadors who made this pilot program possible.

Table 8: Summary of Pro Bono Pilot Program Participants

Organization that Received Pro Bono Assistance	Ambassador who Provided Pro Bono Assistance	Number of Buildings
American Red Cross	Prasad Nair and Daniel Ackmann, PMEI	1
Bnai Israel Congregation	Miriam Benjamin, JDM Associates	1
Christ Episcopal Church	Robert Russo, EnerCon Solutions	2
Covenant Life Church	Prasad Nair and Daniel Ackmann, PMEI	1
The Lutheran Church of St. Andrew	Miriam Benjamin, JDM Associates	1
St. Peter's Church and School	Joe Sparks, Cenergetix LLC	4
Silver Spring United Methodist Church	Mike Whitcomb and Maria Manfre, Montgomery College	2

Montgomery County Public Schools' Benchmarking Efforts

Montgomery County Public Schools (MCPS) manages 205 schools that provide education services for more than 161,000 students. Since 2012, MCPS has been benchmarking the energy consumption of schools in EPA's ENERGY STAR Portfolio Manager tool. Because MCPS manages their own Board of Education building inventory at the state level, separate from the County's buildings, they are not subject to the County's Benchmarking Law for building disclosure requirements.

However, MCPS is choosing to voluntarily participate in the County's Benchmarking program. In June 2017, MCPS voluntarily reported calendar year 2016 benchmarking data for high schools and middle schools to DEP. The 2016 data for the MCPS school buildings that are 250,000 square feet and greater are included in our publicly disclosed Group 1 building data set for individual buildings. MCPS will voluntarily report the elementary schools' energy data updated in Portfolio Manager by June 2018. In October 2018, the MCPS school buildings' calendar year 2017 benchmarking data will be included in our publicly disclosed Group 2 building data set for individual buildings that are 50,000 square feet up to 250,000 square feet.

Voluntary Reports

Note that a handful of building owners reported calendar year 2016 data for 74 buildings not covered under the law (e.g., an exempt use type, below the 50,000 square feet threshold, located in a jurisdiction that does not currently opt into the law). Data for these buildings are not included in this report and will not be disclosed unless requested by the building owner. DEP thanks those building owners for benchmarking and reporting their building energy data by the June 1, 2017 deadline voluntarily.

Looking Ahead

DEP is pleased with the progress of the Benchmarking Law data reporting to date. The open and collaborative dialogue developing between DEP and building owners and property managers about energy consumption is furthering discussions about saving energy and cutting utility costs.

In future annual reports, we hope to illustrate successes from the Law using compliance rates, as well as year-over-year uptake in utility rebate programs and participation in commercial energy programs such as the County's Commercial PACE financing tool and the Montgomery County Green Bank programming.