DISTRICT DEPARTMENT OF THE ENVIRONMENT

District Data Collection Worksheet
Energy Benchmarking of Existing Buildings
2014

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INSTRUCTIONS AND GUIDANCE

1. Overview

This worksheet provides guidance to building owners or their agents (such as property managers or service providers) on the data that needs to be collected in order to benchmark buildings using the U.S. Environmental Protection Agency's (EPA) ENERGY STAR® Portfolio Manager® tool in accordance with the requirements established by the District Department of the Environment (DDOE). This document also contains instructions and guidance for proper reporting.

This worksheet covers requirements for 2014 data reporting, due to DDOE by April 1, 2015. All privately-owned buildings over 50,000 gross square feet are required to report this year. DDOE is updating this guidance document to improve clarity on the requirements of reporting.

In order to benchmark the building, you must gather property use and calendar-year utility data for the building, including from your non-residential tenants. All the data required to be gathered from tenants and utility companies can be found on this worksheet. Non-residential tenants are required by law to provide you with access to the data needed for benchmarking within thirty (30) calendar days of receiving a written request (20 DCMR 3513.6). For your convenience, the District Department of the Environment (DDOE) has also created a *Non-Residential Tenant Information Form* that you can optionally use to request information from the tenants. Even if you are already in possession of the utility information for the tenant spaces, you may still need to collect property use information. **You do not need to collect any space or utility**

information directly from residential tenants; however, you do need to at least acquire aggregate data, which can be obtained directly through Pepco and Washington Gas.

All DDOE forms, along with a comprehensive Frequently Asked Questions (FAQ) document, can be found at http://ddoe.dc.gov/energybenchmarking. You can find technical information and training resources on Portfolio Manager at http://www.energystar.gov/benchmark.

For technical support, please contact the Benchmarking Help Center by phone at 202-671-3300 or 202-525-7036 or by electronic mail at info.benchmark@dc.gov.

2. General Instructions

2.1: About Portfolio Manager

Portfolio Manager® is a widely-used, free, online software tool, designed by EPA to help building owners and managers track and manage energy and water use in their buildings. Portfolio Manager® was overhauled with an all-new user interface in July 2013. The tool requires basic information such as building size, occupancy patterns, and utility information to measure the performance of a building. All types of buildings can be entered into Portfolio Manager® to receive an analysis of their energy and water efficiency, including a weather-normalized Energy Use Intensity (EUI). Twenty building types can also receive a 1-100 score comparing them with similar buildings. The score is calculated by comparing a building's EUI to buildings within the same peer group, based on the statistically significant property use attributes that are inputted into the tool. Being eligible for a score is neither a requirement for benchmarking in Portfolio Manager®, nor for reporting to the District.

2.2 General Steps to Benchmarking and Reporting

1. **Identify** buildings larger than 50,000 gross square feet.
2. **Collect** the data needed to benchmark, as detailed on this worksheet.
3. **Benchmark** by entering the data in ENERGY STAR® Portfolio Manager®
    a. Create an account
    b. Create properties
    c. Enter data on property uses
    d. Enter energy and water meter data
    e. Run the data quality checker to identify common errors or missing data
4. **Report** the data to DDOE. Once benchmarked, it is necessary to submit the data to DDOE through Portfolio Manager®, as described below. *Remember that this guidance document is just a worksheet and does not need to be sent to DDOE.*
    a. Download reporting template and instructions from: http://ddoe.dc.gov/page/report-benchmarking-data.

b. Follow the instructions to verify data accuracy and send the data to DDOE.
c. Save all records for 3 years past the submission date.

2.3: Overview of Required Data:

- General Building Information (**Worksheet Section A**).
  - The building street address, year built, total size, and occupancy rate.
  - The identification number assigned by the District of Columbia. DDOE has published a list of these numbers for buildings recorded as having a floor area of over 50,000 sq. ft. by the District of Columbia Office of Tax and Revenue, at www.ddoe.dc.gov/energybenchmarking. The number(s) should be entered in Portfolio Manager® as the ***District of Columbia Real Property ID*** in the "Standard ID" list. If you have previously reported to DDOE, you should find this new field pre-populated with the correct ID.

    For most properties, this is the property's Square-Suffix-Lot (SSL) or Parcel number. If your property covers multiple parcels or tax lots, and is not a condominium, enter all included SSL/parcel numbers. Condominium buildings are assigned a single complex number (the Square-Suffix-Regime number).
- Property Use Attributes (**Worksheet Section B**):
  - The building gross floor area and key operating characteristics for the building type, or each major space type within a building. Please reference the appropriate sections of this form when using Portfolio Manager® for the purpose of reporting to the District. **Please note that although some information fields may be listed as *optional* within Portfolio Manager®, the District has additional data requirements that Section B incorporates.** Fields that are optional for EPA, but are required in the District, are highlighted in grey block.
- Meter Information (**Worksheet Section C**)
  - Usage for **all fuel types and water** must be reported for calendar year 2014. Because most bills do not begin on the first of the month and go to the last day of the month, you will need to include up to 14 consecutive months of utility usage, including the start and end dates for each bill so that your data is inclusive of January 1, 2014 to December 31, 2014. If you are missing any part of the year, Portfolio Manager® will report "N/A" for your building's Energy Use Intensity (EUI) or Total Water Use. **If your building's Site EUI, Weather-Normalized Source EUI, or Total Water Use for 2014 is "N/A," DDOE will not be able to accept your report.** If you do not have this information readily available, contact your utility provider(s); contact information is provided in Section C.

- If energy or water is individually metered for any *non-residential* tenants within your building, then you must request this information from your non-residential tenants to complete the benchmarking process. If you have five or more tenants, you can get whole-building electricity data directly from Pepco and Washington Gas instead of from the tenants. You *are also required* to obtain aggregate energy and water data for all your individually-metered residential tenants. Again, this aggregated information can be obtained directly from Pepco and Washington Gas instead of from each individual tenant.

- Optional Information (**Worksheet Section B.4**)
  - If you have additional information about your building that you would like to submit to help clarify a poor score or Energy Use Intensity (EUI), you may enter this in the notes field in Portfolio Manager®. Such information may include a description of past or future plans for a building, or legal restrictions that may limit your ability to make upgrades. You must expressly authorize DDOE to make some of the text made public, as DDOE will by default not make any notes field data public. *The notes field currently allows a maximum of 1,000 characters. To conserve space DDOE recommends that you put the text you want made public first, separated from private notes with "##."*

3. Reminders and Updated Guidance for Reporting of 2014 data

3.1 Whole Building Energy Data

Whole building reporting for **all** energy utilities is now required for all types of buildings, including multifamily buildings. Building owners or managers of residential, multifamily buildings with separate metering *must* request aggregate data from Pepco and/or Washington Gas as described in **Worksheet C**. Both these utilities now provide access to aggregated whole building data, as required by the Sustainable DC Act of 2014, and thus the use of whole building data is required, per 20 DCMR 3513.7(a)(2).

Furthermore, thanks to a new online tool from Pepco called Resource Advisor, you now have the ability to automatically load your building's electricity data directly into Portfolio Manager® to calculate your ENERGY STAR® score. Resource Advisor can also be used to request whole building data for your building electronically. There is no fee for using Resource Advisor. Data for natural gas, other energy sources, must still be entered into portfolio Manager by hand or by uploading spreadsheets.

3.2. Excluding Certain Non-Ratable Commercial Spaces

For 2012 reporting, DDOE required that building owners include all spaces within the building, even if those spaces may be excluded from an application for ENERGY STAR certification. In 2013, based on lessons learned from the reporting of 2012 data, stakeholder concerns, and new guidance from EPA, DDOE harmonized our guidance with EPA guidance on this issue:

Spaces that meet the definition of one of the property use types eligible for an ENERGY STAR score in Portfolio Manager (i.e. Following the EPA guidance on ratable space types) cannot be excluded *under any circumstances*. If such a property use type is excluded from Portfolio Manager, the property cannot earn an accurate score. When entering data, DDOE recommends (but does not require) grouping all instances of a single property use type together, unless they vary dramatically in operating characteristics.

It is best practice to include all of a property's floor area when benchmarking. All commercial property uses that do not qualify as one of the types eligible to earn an ENERGY STAR score can be benchmarked as a subtype of the category "Other." You may exclude a portion of the property from the benchmarking report if, and only if, *all* of the following conditions are met:

1. The property use and energy use patterns are significantly different than those of the rest of the building (for example: A restaurant or a gym in an office building);
2. The space is less than 10% of the building's gross floor area;
3. The space must not be a type eligible to receive an ENERGY STAR score;
4. The space's energy use is separately metered or sub-metered for all energy sources, so that both the space's floor area and total energy consumption can be excluded from the benchmarking report; and,
5. The building as a whole is eligible to receive an ENERGY STAR score.

If all of the above conditions are met then that space, and only that space, can be excluded from the building's record in Portfolio Manager, including the building's total gross floor area. These exclusion guidelines do not affect whether the building as a whole is required to report.

3.3 Data Quality Checker

The New Portfolio Manager incorporates a "Data Quality Checker" tool, accessible from the Summary Tab of each property. This checker runs a simple verification that compares your data with typical values. The checker then issues alerts that will help you identify energy values and property use details that are unusual given your building's use, possible typos, incorrect meter readings, missing information, incorrect units of measure, and other common data entry issues. If a value is flagged that is actually accurate, you can provide an explanation. The data quality

checker is currently only available for property types that are eligible for a 1-100 score. ***DDOE highly recommends that you run this checker, with "December 2014" as the timeframe, before submitting to DDOE, if it is available for your property type.***

3.4. Exemptions for Buildings

DDOE regulations allow exemptions from the benchmarking regulations under certain conditions. Major exemption categories are listed below; these are largely not new, but are listed here for clarity. All exemption requests should be made in writing to info.benchmark@dc.gov. DDOE has final authority on whether to grant any exemption.

- *Unoccupied*: A building may apply for an "unoccupied" exemption if on average less than one full-time-equivalent employee (less than 40 person-hours per week/2080 person-hours per year) worked in the building, *exclusive* of security guards, janitors, construction workers, landscapers, and other maintenance personal during the year being reported. (20 DCMR 3511.2(d))
- *National Security*: If you believe the disclosure of the energy use of the building would be harmful to the public interest and national security, you may apply for an exemption from reporting or public disclosure. (20 DCMR 3511.2(b))
- *Sale*: If your building was sold in the year being reported then reporting will recommence once a full calendar year of utility data can be collected. (20 DCMR 3513.11(b))
- *New Construction*: If your building received its Temporary or Permanent Certificate of Occupancy in the year being reported then reporting will commence once a full calendar year of utility data can be collected. (20 DCMR 3513.11(a))
- *Demolition*: If your building was demolished in the year being reported then reporting is not required, as the building no longer exists. (20 DCMR 3513.1)
- *Under the threshold:* If your building is smaller than 50,000 gross square feet, then it is not required to benchmark, unless it shares energy use with other buildings as described below. (20 DCMR 3513.1)

4. Collecting Data for Multiple Buildings

If your property has meters shared across multiple buildings, or building systems (such as a central gas furnace) shared across multiple buildings, without sub-metering, then the energy use cannot be attributed to any individual building. In such cases, the building must be benchmarked as a single property in Portfolio Manager®. Hospitals, K-12 schools, and multifamily housing properties in this situation should be benchmarked as a single property. University campuses and other large campuses comprised of buildings with vastly differing uses should benchmark and

report in the same manner as any other property in Portfolio Manager® but select "More than One" and the number of buildings in the first screen of creating a property.

Note that if you have multiple buildings that are separately metered for all energy sources, but share a common water meter, DDOE recommends that you pro-rate the water use across the buildings by their gross floor area.

Worksheet A. General Building Information

Facility Name: _____

Street Address: _____ Quadrant: _____

City: Washington State: DC ZIP _____

Year Built: _____

DC Real Property ID (Square-Suffix-Lot (SSL), Parcel, or Complex Number) _____

Additional SSL or parcel numbers if needed _____

Total Gross Floor Area: _____ sq. ft.

(Gross Floor Area is the total floor area, expressed in square feet, measured from the principal exterior surfaces of the building(s) and not including parking area(s))

Occupancy Percentage: _____%

Worksheet B. Property Use Attributes

- The new Portfolio Manager has over 80 different property types. However, only 20 are eligible for a 1-100 score. For help choosing the appropriate property type, refer to the Portfolio Manager Help at www.energystar.gov/benchmark and click on *Identify your property type*.
- Property use attributes are used by Portfolio Manager to calculate the Energy Use Intensity per square foot, and for many types, the 1-100 ENERGY STAR score.
- Some properties may contain multiple use types within a single building (e.g., office, data center, and parking, swimming pool, etc.). Select as many major use types as are applicable to your building and fill in their respective information as necessary.
- **Portfolio Manager fields that are generally optional, but are required in the District, are highlighted in grey block within each category.**
- If your property has multiple tenants with the same use type, these uses need to be entered separately only when the number of weekly operating hours among tenants differs by more than 10 hours.
- If the values for a property use attribute changed over the course of the year, you need only record the average value for the year. (However, if the value changed by more than 10%, then it may improve your score to record the date of this change and both the old and new values. The form has a space at the end of Section B where you can note this.)

B.1: Types Eligible for a Score

The following property use types are eligible for an ENERGY STAR score and, if present in your building, must be included when benchmarking. Property Use Attributes that must be collected for these types follow; for simplicity, types with the same data collection requirements have been grouped together.

- Bank branch
- Barracks
- Courthouse
- Data center
- Distribution center
- Financial office
- Hospital (general medical / surgical)
- Hotel
- K-12 school
- Medical office
- Multifamily housing
- Non-refrigerated warehouse
- Office
- Refrigerated warehouse
- Residence hall/ dormitory
- Retail store
- Senior care community
- Supermarket/grocery store
- Wastewater treatment plant
- Wholesale club/supercenter
- Worship facility

Office / Financial Office / Medical Office / Bank Branch / Courthouse

Required:

_____ Gross Floor Area (sq. ft.)

_____ Weekly Operating Hours

_____ Number of workers on main shift

_____ Number of computers

_____ Percent of floor area that is air conditioned (50% or more, Less than 50%, or none)

_____ Percent of floor area that is heated (50% or more, Less than 50%, or none)

Hospital (general medical & surgical)

Required:

_____ Gross floor area (>20,000 SF)

_____ # of staffed beds

_____ # of MRI machines

_____ # FTE workers

_____ Maximum # of floors

_____ Tertiary care facility – yes or no

_____ Number of Buildings

_____ Laboratory on-site – yes or no

_____ Laundry facilities on site – yes or no

_____ Ownership Status (non-profit, for-profit, government)

Hotel

Required:

_____ Gross floor area (sq. ft.)

_____ # of rooms

_____ # of workers on main shift

_____ # of commercial refrigeration/freezer units

_____ On-site cooking – yes or no

_____ Percent of floor area that is cooled (in 10% increments)

_____ Percent of floor area that is heated (in 10% increments)

Optional:

_____ Hours per day the guests are on-site

_____ Number of guest meals served

_____ Floor area of full-service spas

_____ Floor area of gym/fitness center

Hotel, Optional (continued)

_____ Laundry processed at site (choose one: no laundry facility, linens only (e.g. bed/table linens), terry only (e.g. towels, bathrobes), both linens and terry)

_____ Annual quantity of laundry processed on-site

_____ Average Occupancy (%)

Data Center

Required:

_____ Gross floor area (sq. ft.)

_____ IT Energy Configuration – Select one from:

- Uninterruptible Power Supply (UPS) Meter supports only IT Equipment. (Preferred)
- UPS Meter includes non-IT load of 10% or less.
- UPS Meter includes non-IT load greater than 10%. Non-IT load is sub-metered.
- UPS Meter includes non-IT load greater than 10%. Non-IT load is not sub-metered.
- Facility has no UPS Meter.

IT Energy Data – 12 months of measured energy consumption data is required from either the UPS or PDU Meter, depending on IT Energy Configuration. This is entered as an additional meter in Portfolio Manager.

Meter Type (select 1): UPS Output or PDU Input		
Month Start Date	Month End Date	kWh

Optional:

_____ UPS System Redundancy (N, N+1, N+2, 2N, greater than 2N, none of the above)

_____ Cooling System Redundancy (N, N+1, N+2, 2N, greater than 2N, none of the above)

K-12 school

Required:

_____ Gross floor area (sq. ft.)

_____ # of personal computers

_____ # of walk-in refrigeration/freezer units

_____ High school - yes or no

_____ Open weekends – yes or no

_____ On-site cooking – yes or no

_____ Percent of floor area that is cooled (in 10% increments)

_____ Percent of floor area that is heated (in 10% increments)

Optional:

_____ School District

_____ Months of use

Multifamily Housing

Required:

_____ Gross floor area (sq. ft.)

_____ Total number of residential living units

_____ Total number of residential living units in a low-rise setting (1-4 stories)

_____ Total number of residential living units in a mid-rise setting (5-9 stories)

_____ Total number of residential living units in a high-rise setting (10 or more stories)

_____ Number of bedrooms

_____ Government subsidized housing (Yes or No)

_____ Resident population type (No specific type, Dedicated Student, Dedicated Military, Dedicated Senior/Independent Living, Dedicated Special Accessibility Needs, Other Dedicated Housing)

_____ Percent of floor area that is heated (in 10% increments)

_____ Percent of floor area that is cooled (in 10% increments)

Optional:

_____ Number of laundry hookups in common area

_____ Total number of laundry hookups in all units

Retail store

Required:

_____ Gross floor area (sq. ft.)

_____ Weekly operating hours

_____ # of workers on main shift

_____ # of personal computers

_____ # of cash registers

_____ # of walk-in refrigeration/freezer units

_____ # of open & closed refrigeration/freezer cases

_____ Percent of floor area that is cooled (in 10% increments)

_____ Percent of floor area that is heated (in 10% increments)

_____ Exterior entrance to the public – yes or no

Residence Hall / Dormitory / Barracks

Required:

_____ Gross floor area (sq. ft.)

_____ # of rooms

_____ Percent of floor area that is cooled (in 10% increments)

_____ Percent of floor area that is heated (in 10% increments)

_____ Computer lab on-site – yes or no

_____ Dining Hall on-site– yes or no

Supermarket/grocery store or Wholesale club/supercenter

Required:

_____ Gross floor area (sq. ft.)

_____ Weekly operating hours

_____ Workers on main shift

_____ On-site cooking – yes or no

_____ # of walk-in refrigeration/freezer units

_____ Percent of floor area that is cooled (in 10% increments)

_____ Percent of floor area that is heated (in 10% increments)

_____ # of open or closed refrigeration/freezer cases

_____ # of registers and/or personal computers

Senior care community

Required:

_____ Gross floor area (sq. ft.)

_____ # of units

_____ Average Number of Residents

_____ Total Resident Capacity

_____ # of workers on the main shift

_____ # of PCs owned by the community (does not include PCs owned by residents)

_____ # of commercial refrigeration/freezer units

_____ # of commercial washing machines

_____ # of residential washing machines

_____ # of residential electronic lift systems

_____ Percent of floor area that is cooled (in 10% increments)

_____ Percent of floor area that is heated (in 10% increments)

Non-refrigerated warehouse / Distribution center

Required:

_____ Gross floor area (sq. ft.)

_____ Weekly operating hours

_____ # of workers on main shift

_____ # of walk-in refrigerators/freezer units

_____ Percent of floor area that is cooled (in 10% increments)

_____ Percent of floor area that is heated (in 10% increments)

Refrigerated warehouse

_____ Gross floor area (sq. ft.)

_____ Weekly operating hours

_____ # of workers on main shift

Worship facility

Required:

_____ Gross floor area (sq. ft.)

_____ Maximum seating capacity

_____ # of Weekdays of operation

_____ Hours of operation per week

_____ # of personal computers

_____ Presence of cooking facilities - yes or no

_____ # of commercial refrigeration/freezer units

B.2: Secondary Spaces

The following secondary property use types should be included if their energy use contributes to the energy use of the building.

Note that parking floor area does not count towards the threshold for the District benchmarking reporting requirements. More on accounting for parking at:
http://portfoliomanager.supportportal.com/ics/support/KBAnswer.asp?questionID=15974

Parking:

Required:

_____ Open Parking Lot Size (sq. ft.)

_____ Partially Enclosed Parking Garage Size (sq. ft.)

_____ Complete Enclosed Parking Garage Size (sq. ft.)

_____ Supplemental Heating: yes / no

Swimming Pool:

Required:

_____ Swimming pool size, choose from:

- Olympic (50 meters x 25 meters)
- Recreational (20 yards x 15 yards)
- Short Course (25 yards x 20 yards)

_____ Location of Pool: Indoor or outdoor

_____ Months of use

B.3: Any Other Property Uses:

Any property use may be tracked in Portfolio Manager®, and over 60 other property use types are available for selection in the tool. For these types, the only use attributes you need are the use type and the gross floor area. ***It is best practice to include all the energy use and floor area of the building.*** However, under certain specific conditions detailed in the instructions in section 3.1, certain property uses and their requisite floor areas may be excluded from benchmarking in Portfolio Manager®. You must record the information here for your records and in the event of an audit.

Property Use Type: _____

Gross Floor Area: _____

Included in Benchmarking Report? Yes/No

Property Use Type: _____

Gross Floor Area: _____

Included in Benchmarking Report? Yes/No

Property Use Type: _____

Gross Floor Area: _____

Included in Benchmarking Report? Yes/No

Property Use Type: _____

Gross Floor Area: _____

Included in Benchmarking Report? Yes/No

B.4: Optional Information

Optional: Record notes about property use attributes, such as a change to an attribute over the course of the year (if the change was more than 10%) here:

Optional: Record contextual information you want to put into Portfolio Manager's notes field for public disclosure here.

Worksheet C. Meter Data

You need to collect monthly consumption information for all energy sources (usually just electricity and natural gas, but sometimes oil, propane, steam, etc.), and for water. Because most bills do not begin on the first of the month and go to the last day of the month, you will need to include additional months so that your data is inclusive of January 1, 2014 to December 31, 2014. If you are missing part of the year, DDOE will not accept your report. All information on utility data is available at **http://ddoe.dc.gov/page/energy-benchmarking-data-collection**.

The use of whole-building energy data, acquired either from your energy utility provider or your tenants, is required. For electricity and natural gas data, if you have five or more tenants, you can obtain aggregated whole-building data from Pepco or Washington Gas directly. For electricity, you can use a new online tool from Pepco called Resource Advisor (http://www.pepco.com/my-business/energy-benchmarking/) to access aggregate data and automatically load your building's electricity data directly into Portfolio Manager.

If you have *less than five non-residential tenants*, you will need to get your tenants to provide you this data by filling out either a grid similar to the example on the next page, or the Utility Account Information Data Release Form, which authorizes you to request and receive their consumption data directly from the utility companies.

Electricity **Pepco**	Website: www.pepco.com/my-business/energy-benchmarking/ Phone Inquiries: 202-872-2040 E-mail aggregate and individual data requests to kast-south@pepco.com Fax aggregate and individual data requests to (202) 872-3225
Natural Gas **Washington Gas**	Website: http://www.washgas.com/pages/EnergyBenchmarking Phone Inquiries: 703-750-4773 (Option 2) E-mail aggregate data requests to aggregateddata@washgas.com E-mail single meter usage requests to customersupport@washgas.com Fax aggregate and individual data requests to 703-750-4441
Water **DC Water**	Website: http://www.dcwater.com/contact Phone: 202-354-3600 Email: custserv@dcwater.com
Other Utilities (e.g. Fuel Oil Steam…):	Contact your supplier(s). Note that reporting for delivery-based fuels can be done based on the delivery schedule. If the "Enter as Delivery" box is checked as you are creating the meter then you can just enter in delivery dates and amounts in order to comply.

Electricity Usage		
Month Start Date	**Month End Date**	**kWh (kilowatt-hours)**

Natural Gas Usage		
Month Start Date	**Month End Date**	**Therms**

Water Usage		
Month Start Date	**Month End Date**	**kGal (thousand gallons)**

Fuel Oil Usage (if applicable)		
Month Start Date	**Month End Date**	**gallons**

Steam Usage (if applicable)		
Month Start Date	**Month End Date**	**MLbs (million pounds)**

Other Energy Usage (if applicable), Type: _____		
Month Start Date	**Month End Date**	**Units: _____**