

## DISTRICT DEPARTMENT OF THE ENVIRONMENT

## NOTICE OF PROPOSED RULEMAKING

## Energy Performance Benchmarking of Privately-Owned Buildings

The Director of the District Department of the Environment (DDOE), in accordance with the authority in section 107(4) of the District Department of the Environment Establishment Act of 2005, effective February 15, 2006 (D.C. Law 16-51; D.C. Official Code § 8-151.07(4) (2008 Repl.)); Section 4 of the Green Building Act of 2007 (Act), effective March 8, 2006 (D.C. Law 16-234; D.C. Official Code § 6-1451.03 (2008 Repl. & 2011 Supp.)); Mayor's Order 2010-1, dated January 5, 2010; the Clean and Affordable Energy Act of 2008 (CAEA), effective October 22, 2008 (D.C. Law 17-250; D.C. Official Code §§ 8-1773.01, *et seq.* (2011 Supp.)); and Section 2(b)(2) of the Green Building Technical Corrections Emergency Amendment Act of 2011 (GBTCEAA), effective October 11, 2011 (D.C. Act 19-0164; 58 DCR \_\_\_\_), signed by the Mayor on October 11, 2011. (Temporary and Permanent versions of this legislation have also been introduced), hereby gives notice of the intent to adopt the proposed rulemaking to add a new section 3513, entitled "Energy Performance Benchmarking of Privately-Owned Buildings," to chapter 35 (Green Building Requirements) of title 20 (Environment) of the District of Columbia Municipal Regulations (DCMR), and to amend section 3599 (Definitions) of chapter 35 (Green Building Requirements) of title 20 (Environment) of the DCMR. As required by section 12(b) of the Act, prior to the issuance of a Notice of Final Rulemaking, this rulemaking will be submitted to the Council of the District of Columbia for a review period of up to forty-five (45) days from the date of publication of this notice in the *DC Register*, excluding weekends and holidays.

**Summary**

The proposed regulations implement the provisions of the Act and its amendments, which mandate that according to building size and a defined schedule, owners of privately-owned buildings annually benchmark their buildings using the U.S. EPA ENERGY STAR® Portfolio Manager benchmarking tool (Portfolio Manager); that the benchmark and ENERGY STAR® statements of energy performance for each building be submitted to DDOE; and that beginning with the second annual filing for a given building, DDOE make the results available to the public. In addition, the proposed regulations set forth DDOE's implementation and enforcement of the benchmarking requirements.

**Buildings, energy use, and greenhouse gas emissions**

Buildings account for a major portion of a city's energy use, exacting both local as well as global environmental costs. This fact was underscored in the District's 2006 Greenhouse Gas Inventory report, which found that buildings (primarily large commercial buildings) account for seventy-four percent (74%) of greenhouse gas emissions released in the District. When fossil-fuel based energy is generated to power buildings, pollutants such as smog-producing sulfur and nitrogen oxides are produced and eventually end up in a region's air and waterways. High levels of ground-level ozone, which contribute to serious health problems among vulnerable populations, are also associated with the production of energy used to power buildings.

Energy use also has a significant impact on a building's operations budget, costs that are borne by building owners and their tenants. For tenants of commercial office buildings, energy inefficiency means additional lease costs, and the loss of dollars that affect the bottom-line of building owners, tenants, and investors. Energy inefficiency also disproportionately affects low-income residents, who often must forgo such necessities as health care and food to pay high utility bills in inefficient buildings.

Increasing the energy efficiency of the District's building stock is an essential component of any effort to make the District more efficient and environmentally sustainable. To begin to address this critical area of energy use, the Act required that beginning in 2008, public buildings be designed to achieve a seventy-five (75) or higher rating using U.S. EPA's ENERGY STAR® Target Finder tool, an energy modeling tool that enables a design team to model and plan future energy performance. After construction, these buildings were further required to be annually benchmarked using the Portfolio Manager benchmarking tool. The DC Council then took the next environmentally progressive step of enacting the CAEA, which amended the Act to include the set of efficiency tracking requirements for existing private and public sector buildings that this regulation addresses.

The CAEA initiated benchmarking requirements beginning in Fiscal Year 2009 for the District's public buildings of ten thousand square feet (10,000 sq. ft.) in size or larger. Beginning with calendar year 2010, private buildings over two hundred thousand square feet (200,000 sq. ft.) are required to report data, with the law expanding coverage to include private buildings over fifty thousand square feet (50,000 sq. ft.) by 2013.

The CAEA's expanded benchmarking requirements for public buildings, and new requirements for the private sector, are intended to make energy and water performance information for the city's largest buildings readily available to the public. Easily accessible information about building performance will lead to better-informed decisions by parties who buy, lease, or manage buildings. Transparent energy and water performance information can, in particular, highlight the need for improvements in low-scoring buildings, and inform and encourage building owners to make their buildings more efficient and competitive in the marketplace. Greater awareness about energy and water use in buildings and follow-up conservation measures will lead to reduced energy consumption and its accompanying positive environmental and financial impacts.

#### **The U.S. EPA's Portfolio Manager**

Portfolio Manager, the U.S. EPA's online energy benchmarking system, is a widely accepted tool that enables building owners to track energy use in their buildings and compare a building's energy performance against similar buildings nationwide. Portfolio Manager is used by building owners throughout the country as a tool to track and evaluate energy and water consumption, develop energy management goals over time, and identify strategic opportunities for cost savings. Additionally, the U.S. Green Building Council references Portfolio Manager as the measurement tool to verify energy performance under the Leadership in Energy and Environmental Design (LEED) for Existing Buildings, Operations and Maintenance standard.

Portfolio Manager energy performance is reported as either a score on a scale of one (1) to one hundred (100) relative to similar buildings nationwide, or as an Energy Use Intensity (EUI)

result when the inventory of similar buildings is not sufficient to allow for a comparative statistical scoring. Portfolio Manager accounts for the impact of local weather variations, as well as changes in key physical and operating characteristics of each building type. From on-site fuel combustion, purchased electricity, and heating and cooling data, Portfolio Manager can calculate building greenhouse gas emissions as carbon dioxide, methane, and nitrous oxide. Portfolio Manager can also track energy and water use trends as compared with the costs of these resources, thus providing a helpful tool for understanding the relative costs associated with a given level of building performance.

### **Outline of the Energy Benchmarking Regulation**

This regulation provides specific instructions to the owners and tenants of privately-owned buildings on how to fulfill the District benchmark requirements. The regulation identifies the building size-based timeline that triggers benchmark requirements with each successive year, and establishes a schedule for requesting and reporting building information necessary to complete annual benchmarking. The regulation identifies District-specific building information that should be incorporated into a building owner's Portfolio Manager account to generate acceptable benchmark results, including standard Portfolio Manager fields, requisite water and space use attributes information, and voluntary renewable energy information. The regulation also provides general guidance on how to report information to DDOE.

This regulation establishes the requirements for residential as well as non-residential reporting, and addresses issues related to partial and incomplete benchmark reporting, and standards for reporting verification. Finally, the regulation addresses the authority to assess a fine of not more than one hundred dollars (\$100) for each day that a building owner or non-residential tenant fails to provide the benchmarking information required by the Act, given to DDOE by the GBTCEAA.

This regulation is designed to ease implementation by integrating established Portfolio Manager tools. Many building owners and managers in the District are already using the Portfolio Manager system. Variation from the "standard" Portfolio Manager requirements is limited to requiring building owners to report most data fields that are identified as optional within Portfolio Manager. This additional reporting is required for benchmarking in the District, because DDOE considers the data sufficiently important to ensure robust reporting.

DDOE will provide additional guidance, reference documents, and resource information on Portfolio Manager at [www.ddoe.dc.gov](http://www.ddoe.dc.gov). Various forms required by the regulation will be provided in an electronic format. Final reporting will be done through a "District Benchmark Template" that interacts directly with the owner's Portfolio Manager account and can be completed and submitted online by the building owner.

### **Selected Section-by-Section Explanations**

Subsections 3513.1 and 3513.2 define the application of benchmarking requirements using a building size-based phase-in prescribed by the Act, as amended by the CAEA. For purposes of reporting, a building owner should calculate gross square foot area of the building's primary spaces as defined by Portfolio Manager in order to determine if the building meets the size thresholds in Section 3513.1. When calculating building size in order to determine if a building

meets the two hundred thousand (200,000), one hundred fifty thousand (150,000), one hundred thousand (100,000), or fifty thousand (50,000) square feet threshold for reporting, secondary spaces, such as parking garages, are not included. However, when benchmarking a building, building owners must fully report and account for secondary spaces within Portfolio Manager, even if this increases the reported gross square foot area above the threshold delineated in the Act. These secondary spaces contribute to the complete energy profile of a building; therefore, the District is requiring this information as part of the benchmark calculations. This requirement is consistent with the intent of the Act, which was to account for all of the energy use associated with operations and use of a building.

Subsection 3513.3 provides an overview of the steps building owners should follow to fulfill District-based benchmark requirements. District benchmarking requirements go beyond standard Portfolio Manager, and include mandatory reporting of water data and most space use attributes that Portfolio Manager identifies as "optional". The requirement to report water usage reflects the growing importance of tracking and managing water use in the District. The collection of space use attributes is intended to provide more robust analysis and allow completion of benchmarking when only partial building information is available.

Subsection 3513.4 identifies the timeframe and processes that building owners must use to obtain full building information for benchmarking when owners do not have direct access to that information. The subsection references DDOE-developed guidance forms that a building owner is required to use to obtain the necessary information from tenants, and clarifies that building owners are required to report benchmarking results, even when tenant information is not received.

Subsection 3513.5 clarifies that non-residential tenants are required to provide energy, water, and space use information to building owners, including information on sub-leased space, and are subject to fines for noncompliance.

Subsection 3513.6 identifies the date for benchmarking reports to be released to DDOE, April 1, for years 2012 and thereafter. To give building owners and tenants sufficient time to gather utility information to fulfill benchmarking requirements, the GBTCEAA amended the Act and changed this date from January 1 to April 1, each year.

Subsections 3513.7 and 3513.8 specify when reporting is required for new buildings, for buildings with a change of ownership, and change of non-residential tenants.

Subsection 3513.9 identifies an alternate reporting path for owners of residential and non-residential buildings when a reasonable effort has been made by that owner to obtain tenant information, but that information has not been received. As outlined in the rule, non-residential building owners may use partial-building reporting within established parameters. Residential building owners are provided with two (2) alternative approaches for benchmarking: an extrapolation method that is based on ten percent (10%) of the tenant units' information and common facilities, or a partial building method that is based on only common area and common utility information. In all cases, whole building benchmark reporting is preferred, and DDOE anticipates increasing availability of aggregated building data from utilities over time.

Alternate methods for residential and non-residential buildings are provided only after reasonable effort has been made by a building owner to obtain full whole building information. Of the two (2) alternate methods available to owners of residential buildings, the extrapolated method for calculating energy performance is preferred over partial building reporting, as this method incorporates representative living units within a building as well as common spaces.

Subsection 3513.10 requires building owners to submit a report with a one (1) to one hundred (100) score result for building types for which a Portfolio Manager benchmark score are available. Alternatively, building owners with a building of a type for which a Portfolio Manager benchmark score is not available, are required to submit a report with an EUI result. However, in the event that circumstances occur that result in insufficient information to achieve either a Portfolio Manager benchmark score or an EUI result, then the building owner must explain why the requirements of the Act were not met in reasonably sufficient detail to avoid fines. The online filing template will include an option to provide such an explanation.

Subsection 3513.11 establishes record-keeping requirements for building benchmark information. Benchmark information is to be maintained for the purpose of inspection and audit as requested by DDOE.

Subsection 3513.12 establishes a process for notifying building owners and non-residential tenants of noncompliance and for issuing fines of not more than one hundred dollars (\$100) per day. The subsection also allows for appeals by building owners and non-residential tenants pursuant to the Office of Administrative Hearings Establishment Act of 2001, effective March 6, 2002 (D.C. Law 14-76; D.C. Official Code §§ 2-1831.01, *et seq.* (2007 Repl. & 2011 Supp.)).

Finally, Subsection 3513.13 clarifies that, for reporting of 2010 data to be submitted in 2011, building owners shall release data to DDOE by the effective date of this regulation. As noted above, in all subsequent years, the compliance date for release of data to DDOE will be April 1.

Chapter 35, **GREENT BUILDING REQUIREMENTS**, of title 20, **ENVIRONMENT**, of the **DCMR** is amended by adding a new section 3513, entitled “Energy Performance Benchmarking of Privately-Owned Buildings,” to read as follows:

**3513 ENERGY PERFORMANCE BENCHMARKING OF PRIVATELY-OWNED BUILDINGS**

3513.1 An owner of a privately-owned building shall annually benchmark the performance of the building using the ENERGY STAR<sup>®</sup> Portfolio Manager benchmarking tool, according to the following schedule (D.C. Official Code § 6-1451.03(c)(2)(B) (2008 Repl. & 2011 Supp.):

- (a) All buildings over two hundred thousand square feet (200,000 sq. ft.) of gross floor area, beginning in 2010 and thereafter;
- (b) All buildings over one hundred fifty thousand square feet (150,000 sq. ft.) of gross floor area, beginning in 2011 and thereafter;

- (c) All buildings over one hundred thousand square feet (100,000 sq. ft.) of gross floor area, beginning in 2012 and thereafter; and
  - (d) All buildings over fifty thousand square feet (50,000 sq. ft.) of gross floor area, beginning in 2013 and thereafter.
- 3513.2 When determining the size of a building to determine the application of § 3513.1, a building owner shall:
  - (a) Calculate the gross floor area of a building in Portfolio Manager; and
  - (b) Not include secondary spaces, as defined by Portfolio Manager.
- 3513.3 According to the schedule in § 3513.1, and the requirements specified in § 3513.4 through § 3513.6, a building owner whose building falls under the benchmarking requirements for the previous calendar year shall:
  - (a) Open a Portfolio Manager account;
  - (b) Request from any tenants information necessary to fulfill the requirements of § 3513.3(c);
  - (c) Enter into Portfolio Manager the building information required by the District Data Collection Worksheet, including:
    - (1) Energy and water utility information;
    - (2) Space use attributes information; and
    - (3) Garage or other secondary space information associated with a building's energy and water use; and
  - (d) Authorize the transfer of a District Benchmark Results and Compliance Report to the District, via the District Benchmark Template.
- 3513.4 Beginning in 2012 and thereafter, and by February 1 of each year, a building owner shall request from a tenant information required for the owner to fulfill the requirements of § 3513.3(c). The following applies:
  - (a) An owner of a non-residential building shall request the information using the Non-Residential Tenant Notification Letter and Non-Residential Tenant Information Form;
  - (b) An owner of a residential building shall request the information using the Residential Tenant Notification Letter and Residential Tenant Information Form; and

- (c) The failure of a tenant to report to a building owner the information required under § 3513.3(c) shall not relieve a building owner of the performance benchmarking obligations under D.C. Official Code § 6-1451.03(c) (2008 Repl. & 2011 Supp.)

3513.5 Beginning in 2012 and thereafter, and within thirty (30) days of receiving a Non-Residential Tenant Notification Letter and Non-Residential Tenant Information Form from the building owner, a non-residential tenant shall provide a complete and accurate Non-Residential Tenant Information Form to the building owner. The following applies:

- (a) Tenants who sublease their space are responsible for collecting and reporting sub-tenant information and submitting it to the building owner; and
- (b) Failure of a non-residential tenant to submit a timely, complete, and accurate Non-Residential Tenant Information Form to the building owner as required by this section, shall subject the tenant to fines under § 3513.12.

3513.6 Beginning in 2012 and thereafter, and by April 1 of each year, a building owner shall authorize the transfer to the District of a timely, complete, and accurate District Benchmark Results and Compliance Report, exclusive of any financial information.

3513.7 Consistent with the requirements of § 3513.1, a building owner shall fulfill the requirements of § 3513.3 for the first full calendar year after:

- (a) The building receives its Temporary Certificate of Occupancy or Certificate of Occupancy, whichever comes first; or
- (b) The building changes ownership.

3513.8 If a building owner receives notice that a non-residential tenant intends to vacate a building before the information required by § 3513.4 is due, then:

- (a) The building owner shall request that the tenant complete a Non-residential Tenant Information Form for the period the tenant occupied the building; and
- (b) The tenant shall provide the form to the building owner as soon as practicable after the tenant vacates the building.

3513.9 When a building owner does not have complete whole-building information sufficient to fulfill the requirements of § 3513.3(c), and has made a reasonable effort to obtain from a tenant the information required by § 3513.4, and that information has not been received from a tenant, then:

- (a) The owner of a non-residential building shall use partial-building benchmark reporting, which shall include available whole-building information, common area information, and available tenant information to fulfill District benchmarking requirements;
- (b) The owner of a residential building shall use extrapolation benchmark reporting or partial building benchmark reporting, provided that, the owner shall first make a reasonable effort to use extrapolation benchmark reporting before using partial-building benchmark reporting:
  - (1) Extrapolation benchmark reporting shall be performed as follows:
    - (A) A building owner shall obtain energy, water, and space use information for all common areas and for a minimum of ten percent (10%) of residential units in each apartment line in the building; and
    - (B) For a utility type that is not metered for the whole building, extrapolation must be performed for each month as follows:  
Total energy or water use =  $[(U1 / N1) * T1] + [(U2 / N2) * T2] + [(U3 / N3) * T3] \dots [(Un / Nn) * Tn]$ , where:
      - (i) U is the total utility usage (energy or water) collected by a building owner for the month for 10% or more of the apartments in the specified apartment line for a given utility type;
      - (ii) N is the number of apartments in the specified apartment line for which the utility use was collected;
      - (iii) T is the total number of apartments in the specified apartment line;
      - (iv) 1 refers to apartment line 1;
      - (v) 2 refers to apartment line 2; and
      - (vi) n refers to the total number of apartment lines in the building, or the final apartment line under consideration in the building;
  - (2) Residential partial building benchmark reporting shall only include available whole-building information and common area information.

3513.10 When submitting a District Benchmark Results and Compliance Report:

- (a) A building owner reporting on a building type for which:
  - (1) A Portfolio Manager benchmark score is available, shall submit a report with a score result between one (1) and one hundred (100); or
  - (2) A Portfolio Manager benchmark score is not available, shall submit a report with an Energy Use Intensity (EUI) result; and
- (b) For which insufficient information is available to achieve either a Portfolio Manager benchmark score or an EUI result, the building owner shall explain why the requirements of § 3513.3(c) were not met in reasonably sufficient detail to avoid the penalties of § 3513.12 as part of the District Benchmarking Results and Compliance Report to the District.

3513.11 A building owner shall comply with the following record retention requirements:

- (a) Preserve benchmark results and supporting records for a period of at least three (3) years. The records shall include:
  - (1) The United States Environmental Protection Agency (U.S. EPA) and DDOE confirmation emails demonstrating proof-of-submission date;
  - (2) A copy of the building owner's energy, water, and space use attribute information entered into Portfolio Manager;
  - (3) Copies of applicable tenant information forms and letters; and
  - (4) Additional information used to support the information required by § 3513.3(c); and
- (b) Make benchmark results and supporting records available for inspection and audit by DDOE during normal business hours, following reasonable notice.

3513.12 If the Director determines that a second violation of this section has occurred, and the Director has issued a warning notice to the building owner or tenant for the initial violation, a building owner or non-residential tenant shall be subject to the fines set forth in this subsection for a violation of a requirement of this section. The following fines shall apply:

- (a) A building owner or non-residential tenant shall be assessed a penalty by DDOE of not more than one hundred dollars (\$100) per calendar day, during which a timely, complete, and accurate District Benchmark Results and Compliance Report has not been submitted to the District, pursuant to § 2(b)(2)(B) of the Green Building Technical Corrections Emergency

Amendment Act of 2011, effective October 11, 2011 (D.C. Act 19-164; 58 DCR \_\_\_\_), signed by the Mayor on October 11, 2011; and

- (b) A building owner or non-residential tenant who receives a notice of infraction may request a hearing or adjudication pursuant to instructions contained in the notice of infraction, which shall be conducted pursuant to the Office of Administrative Hearings Establishment Act of 2001, effective March 6, 2002 (D.C. Law 14-76; D.C. Official Code §§ 2-1831.01, *et seq.* (2007 Repl. & 2011 Supp.)).

3513.13 Sections 3513.4 and 3513.6 notwithstanding and during calendar year 2011 only, a building owner shall by the effective date of this regulation, authorize the transfer to the District of a timely, complete, and accurate District Benchmark Results and Compliance Report, exclusive of any financial information.

Section 3599, DEFINITIONS, of chapter 35, GREEN BUILDING REQUIREMENTS, of title 20, ENVIRONMENT, of the DCMR is amended as follows:

Subsection 3599.1 is added to before the list of terms and their definitions to read as follows:

3599.1 The following terms and phrases shall have the meaning ascribed:

The following definitions are added to section 3599 (Definitions) in alphabetical order:

**Apartment line** – residential units that are stacked one above another, and that have substantially similar shapes and square footage.

**Benchmark results** – the outcome generated by Portfolio Manager that includes either Energy Use Intensity (EUI) and or a one (1) to one hundred (100) benchmark score.

**Building owner** – an individual, partnership, corporation, trust, association, firm, joint stock company, organization, commission, or other private entity either possessing title or designated to govern a privately-owned building, or an agent authorized to act on behalf of the private entity.

**Director** – the Director of the District Department of the Environment.

**District Benchmark Results and Compliance Report** – the Portfolio Manager report that includes benchmark results, identifies reporting methodology, and confirms completion of a building's benchmarking to the District.

**District Benchmark Template** – the template developed by DDOE in partnership with the U.S. EPA, that exports from Portfolio Manager the building

information required for building owners to fulfill District benchmarking requirements.

**District Data Collection Worksheet** – the list of data fields required to fulfill District benchmarking requirements.

**ENERGY STAR<sup>®</sup> Portfolio Manager benchmarking tool or Portfolio Manager** – the system developed by the U.S. EPA that rates the performance of a building using the U.S. EPA's national Energy Performance Rating system.

**Extrapolated benchmark reporting** – an alternative benchmarking method that includes available whole-building information, common area information, and additionally, available tenant information that accounts for at least ten percent (10%) of residential units in each apartment line in the building.

**Non-Residential Tenant Information Form** – the District form used by a building owner to collect the information required for benchmarking from a non-residential tenant.

**Non-Residential Tenant Notification Letter** – the District form letter used by a building owner to inform a non-residential tenant that the tenant is required to provide the information required for benchmarking.

**Partial-building benchmark reporting** – an alternative benchmarking method that includes available whole-building information, common area information, and for non-residential buildings only, available tenant information.

**Residential Tenant Information Form** – the District form used by a building owner to collect the information required for benchmarking from a residential tenant.

**Residential Tenant Notification Letter** – the District form letter used by a building owner to request the information required for benchmarking from a residential tenant.

**Space use attributes** – information such as the conditioned floor area, weekly operating hours, the number of occupied units, and the number of computers in use as defined by the Portfolio Manager, according to a building type.

**Tenant** – a person leasing, renting, or occupying a non-residential or residential apartment, condominium, cooperative, office, or other space in a building.

**U.S. EPA** – the United States Environmental Protection Agency.

**Utility** – a company distributing, supplying, or transmitting electricity, natural gas, or other fuel for heating, cooling, or power generation, or water to a building.

**Whole-building information** – information on space use attributes or on one (1) or more of the building's utilities, that is complete for an entire building.

All persons desiring to comment on DDOE's proposed regulations should file comments in writing not later than thirty (30) days after the publication of this notice in the *D.C. Register*. Comments should be labeled "Energy Star Regulations" and filed with the DDOE, 1200 First Street NE, 5<sup>th</sup> floor, Washington D.C. 20002, Attention: Jennifer Todd, or by e-mail to [jennifer.todd@dc.gov](mailto:jennifer.todd@dc.gov).