

SECTION 1 – INTRODUCTION

1.1 Authority

This rule is adopted by the City and County of Denver Office of Climate Action, Sustainability, and Resiliency in accordance with the authority in Article XIV of Chapter 10 of the Denver Revised Municipal Code (“D.R.M.C.”).

1.2 Scope and Purpose

The purpose of this rule is to establish a High-Performance Existing Building Program that requires Covered Building Owners to benchmark building energy performance and make such energy performance information publicly available in-order-to raise awareness and drive action. The purpose of this rule is also to require covered building owners to address existing building performance through energy efficiency, renewables, and/or renewable heating and cooling (electrification) to reduce greenhouse gas emissions from the built environment to help the City and County of Denver achieve its climate action goal of zero greenhouse gas emissions in existing buildings by 2040.

SECTION 2 – DEFINITIONS

Except as noted below, words and phrases shall have the meaning assigned by the Charter of the City and County of Denver and the D.R.M.C. As used in this rule, the terms listed below shall have the following meanings:

2.1 *“Benchmarking”* means measuring a Covered Building’s energy performance using the ENERGY STAR Portfolio Manager tool or other similar platforms as CASR may designate.

2.2 *“Benchmarking Submission”* means the data submitted each year via the ENERGY STAR Portfolio Manager tool, or other similar platforms as CASR may designate, using a template and submission link to be distributed and publicized by CASR. All information expressly denoted as mandatory by either ENERGY STAR Portfolio Manager or CASR shall be included in the submission.

2.3 *“CASR”* means the Office of Climate Action, Sustainability, and Resiliency.

2.4 *“Covered Building”*

A. Means for purposes of benchmarking, a covered building is any commercial or multifamily individual building in the City and County of Denver except the following:

1. A building that was not occupied and did not have a certificate of occupancy or temporary certificate of occupancy for all twelve (12) months of the calendar year for which benchmarking is required;
2. A building that was not occupied, due to renovation, for all twelve (12) months of the calendar year for which benchmarking is required;
3. A building for which a demolition permit for the entire building has been issued and for which demolition work has commenced on or before the date the benchmarking report is due;

4. A building that is presently experiencing qualifying financial distress, as defined by any of the following: (1) the building is the subject of a qualified tax lien sale or public auction due to property tax arrearages; (2) the building is controlled by a court appointed receiver; or (3) the building has been acquired by a deed in lieu of foreclosure;
 5. A building that is used primarily for manufacturing or agricultural processes; This exclusion applies only if a facility where the majority of energy is consumed for manufacturing, agriculture, or for other process loads. Process loads are energy consumed for bona fide purposes other than heating, cooling, ventilation, domestic hot water, cooking, lighting, appliances, office equipment, data centers, or other plug loads.
- B.** Means for purposes of existing building performance requirements, a covered building is any commercial or multifamily individual building in the City and County of Denver except the following:
1. A building for which a demolition permit for the entire building has been issued and for which demolition work has commenced on or before the particular compliance date.
- 2.5** ***“Covered Municipal Building”*** means a Covered Building that is owned or operated by the City and County of Denver.
- 2.6** ***“ENERGY STAR Portfolio Manager”*** means the online tool created by the US Environmental Protection Agency used to measure and track a building’s energy use, water consumption, and greenhouse gas emissions.
- 2.7** ***“Executive Director”*** means the executive director of the Office of Climate Action, Sustainability, and Resiliency of the City.
- 2.8** ***“Existing Building Performance”*** The energy efficiency and renewable energy of a covered building measured by site Energy Use Intensity (EUI) reported using data reported via the ENERGY STAR Portfolio Manager tool or other platforms as CASR may designate.
- 2.9** ***“Gross Floor Area”*** means the total property square footage, measured between the principal exterior surfaces of the enclosing fixed walls of a building, as defined in the ENERGY STAR Portfolio Manager definitions.
- 2.10** ***“High Performance Existing Buildings Program”*** means the administrative program implemented by CASR requiring the benchmarking, reporting, and existing building performance in commercial and multifamily buildings that are located within the City and County of Denver.
- 2.11** ***“Owner”*** means the person or entity having a legal or equitable interest in real property and its fixtures and appurtenances, which shall explicitly include but not be limited to a homeowner’s association.

2.12 *“Site Energy Use Intensity” or “EUI”* means a building’s energy use expressed as energy per square foot per year as a function of its size and other characteristics, normalized for weather and other characteristics that are significant drivers of energy performance as feasible with the reporting platform used. A building’s EUI is calculated by dividing the total energy consumed by the building in one year (measured in kBtu) by the total gross floor area of the building

SECTION 3 – REQUIREMENTS FOR BENCHMARKING AND REPORTING

3.1 Compliance Dates

Owners of Covered Buildings shall benchmark the building's energy usage annually using the ENERGY STAR Portfolio Manager tool, or other platform as CASR may designate, and by June 1 each year, shall accurately report energy performance information to the Office of Climate Action, Sustainability, and Resiliency for the previous calendar year, as set forth in D.R.M.C. § _____:

3.2 Compliance Process

Owners of Covered Buildings must report each such building’s energy use annually for the previous calendar year using the ENERGY STAR Portfolio Manager in accordance with the ENERGY STAR Portfolio Manager’s instructions (located at the following web address: <https://www.energystar.gov/buildings/benchmark>), unless otherwise specified. No later than June 1st of each year, Owners of Covered Buildings must complete the following steps in the ENERGY STAR Portfolio Manager for each such building:

- A.** Create or update a building profile with all building details, including the Denver Building ID (DBID) supplied by CASR.
- B.** Enter all space types, with applicable Gross Floor Area, calculated in accordance with the ENERGY STAR Portfolio Manager’s definition of Gross Floor Area, and any further guidance that CASR may provide.
- C.** Enter energy use data for the whole building for the previous calendar year such that it encompasses January 1st to December 31st of that year.
 - i.** If whole-building data are unavailable from a utility for a given energy type, or if an Owner wishes to verify utility-supplied data, then for any tenant-occupied space that is separately metered for such energy type, Owners of Covered Buildings shall request such data from such tenants for the previous calendar year.
 - ii.** If an Owner required to request tenant data under this section receives notice that a tenant intends to vacate a building before the end of the calendar year, the Owner must request from said tenant any necessary energy use or space use data from January 1st of that year to the date the tenant vacates the space.
- D.** For multiple buildings on a single tax parcel and buildings on multiple tax parcels that share meters, Owners shall report energy use as follows:
 - i.** Owners must report individually in the ENERGY STAR Portfolio Manager any buildings that are separately metered or sub-metered for all energy types.

- ii. Owners must report individually in the ENERGY STAR Portfolio Manager any buildings for which one or more types of energy are not separately metered or sub-metered, with any energy use that is not separately metered or sub-metered apportioned by Gross Floor Area, whenever such energy use can be reasonably apportioned by this method. The apportioned data shall be marked as an estimation.
 - iii. For any building that does not fit within either of the above circumstances, or any building within a campus type that is eligible for an ENERGY STAR Portfolio Manager score as a campus, the Owner may report as a campus in the ENERGY STAR Portfolio Manager.
- E. Submit a completed Benchmarking Submission to CASR by June 1st of each year. The submission shall be through the ENERGY STAR Portfolio Manager, or other platforms as CASR may designate, using a template and submission link to be distributed and publicized by CASR. Owners must report all information expressly denoted as mandatory by either the ENERGY STAR Portfolio Manager or CASR, which may include:
 - i. Basic descriptive information to track compliance with this rule, including the building address, Gross Floor Area, all use types, and the name of the individual or entity making the submission;
 - ii. Annual and monthly energy usage information, including, but not limited to, energy usage by individual fuel source, ENERGY STAR Portfolio Manager score, where available, site EUI, source EUI, normalized site EUI, normalized source EUI, and total annual greenhouse gas emissions; and
 - iii. The fields needed for each building type to verify the accuracy of an ENERGY STAR Portfolio Manager score.
- F. Before making a Benchmarking Submission, the Owner shall run all automated data quality checker functions available within the ENERGY STAR Portfolio Manager tool, and shall correct all identified missing or incorrect information. At CASR's discretion CASR can verify the errors or CASR direct the owner to have a 3rd party verification of benchmarking reports will be required at the owner's expense.
- G. Any Owner requesting an exemption from Benchmarking shall provide CASR any and all documentation requested to substantiate the request or otherwise assist CASR in determining whether an exemption applies. Any exemption approved by CASR shall be limited to the Benchmarking Submission for which the request was made and shall not extend to past or future submissions.
- H. When a building changes ownership, the previous Owner shall transfer any existing ENERGY STAR Portfolio Manager property profile to the new Owner along with any energy and space use data that has been collected and is necessary for completing the next required Benchmarking Submission. Each new Owner shall request that the property profile be transferred to their ENERGY STAR Portfolio Manager account.

3.3 Data Verification

Owners of Covered Buildings shall maintain the following records for a period of at least five (5) years, and shall make such records available for inspection during business hours upon reasonable notice from CASR:

- A. ENERGY STAR Portfolio Manager account data;
- B. Proof of tenant data requests for energy or space use attribute data from any separately-metered tenants; and
- C. Information substantiating the energy data and space use attribute information entered into the ENERGY STAR Portfolio Manager.

SECTION 4 – REQUIREMENTS FOR EXISTING BUILDING PERFORMANCE FOR COVERED BUILDINGS WITH A GROSS FLOOR AREA EQUAL TO OR GREATER THAN 25,000 SQUARE FEET

4.1 Establishing Building Type

- A. Building types are defined by ENERGY STAR Portfolio Manager <https://portfoliomanager.energystar.gov/pm/glossary>
- B. If a building is designated as ‘other’ or if the City suspects the incorrect type was selected then the City will assign the most accurate property type and the owner will have the opportunity to verify the property type.
- C. The City shall identify buildings that have been incorrectly designated a building type through methodologies that may include, but are not limited to, a review of google street view or inconsistency between a building’s energy performance relative to its typology. If the City believes a property type is incorrect, the City will assign the most accurate property type and the owner will have the opportunity to verify the property type.
- D. The City has the final authority to assign a building type to a building.

4.2 Establishing Targets

In General. Owners of covered buildings with a gross floor area equal to or greater than 25,000 square feet must meet energy performance targets in calendar years 2024, 2027 and 2030. The targets will be set for 2030 for every covered building type in Denver such that 30% total energy savings across all covered buildings is achieved. Buildings will be assigned a target and assigned a building type as set forth below. If a building’s type changes over time, then CASR shall update the established target to align to the new building type.

- A. Similar building types, as defined by ENERGY STAR Portfolio Manager, shall be grouped for target setting purposes. Examples of weather normalized EUI targets are provided in Table 1 for each group. These are based upon 2019 benchmarking data and national CBECs data. If additional building types are found CASR will set targets for them based on best available local and national data.

Groupings and targets for each group are under development. Below are sample targets for common building types. -

Table 1.

Property Type	2030 Target EUI
Multifamily Housing	45
Office	50
Hotel	62
Medical Office	72
Non-Refrigerated Warehouse	31
Distribution Center	28
Self-Storage Facility	8
Strip Mall	73
Supermarket/Grocery Store	167
Retail Store	47
Senior Care Community	68
College/University	62

- B. Mixed-use buildings will have a blended target based on the percentage of gross square footage assigned to each building type for any type that is over 10% of the square footage.
- C. Each owner of a covered building shall maintain the interim targets each subsequent year and shall maintain the final energy performance target indefinitely

4.3 Establishing baseline EUI.

- A. For existing covered buildings that reported for benchmarking in 2019, the baseline shall be the EUI that was reported for the covered building that year.
- B. For existing covered buildings where no baseline data was received for 2019, CASR shall establish a reasonable baseline based on the building type and benchmarking data from other years for that covered building if available.
- C. For new covered buildings, the baseline shall be the predicted EUI for that covered building if one was submitted as part of energy code compliance. If no predicted EUI is available, CASR shall establish a reasonable baseline based on the building type.

4.4 Establishing Interim Targets

CASR will established each covered building’s required interim targets for 2024 and 2027 by drawing a straight line from that covered building’s 2019 baseline EUI to the final EUI target for that building type.

- A. For existing covered buildings that reported for benchmarking in 2019, CASR will set required interim targets by May 1, 2022.
- B. For existing covered buildings where no baseline data was received for 2019, or if CASR has determined that the building type needs to be reviewed and possibly corrected for submission in the 2022 benchmarking report, CASR will set required interim targets by September 1, 2022.
- C. For new covered buildings, CASR will set required interim targets within 6 months of receiving the first benchmarking report for that building.

4.5 Alternate Compliance Options

If a covered building owner cannot reasonably meet one or more of the applicable interim or final energy performance targets the owner of a covered building may apply for one of the following alternate compliance options. Applications will be review and approval by CASR. CASR may request input from the Energize Denver Technical Advisory Committee.

- A. Different compliance timeline:** The owner of a covered buildings may apply to change the compliance timeline if capital improvements will be most cost effective if they wait until: end of system life, timing of a major renovation, or other similar reason. To adjust the timeline the owner of a covered building must submit a retrofit plan addressing the following:

 - i. The timely completion of quick payback items like LED lighting upgrades, VFD and motor upgrades, and controls upgrades.
 - ii. Justification for why waiting for efficiency measures provides a better total greenhouse gas savings than immediate installation of solar panels or purchase of off-site solar to achieve compliance, if solar is feasible because the building is 5 stories or fewer or off-site solar is readily available for purchase.
 - iii. Planned project dates including an energy model showing the results of the future planned project and how and when it meets the required EUI reduction targets.
- B. Different compliance timeline for under-resourced buildings:** The owner of a covered building that has an affordability covenant with 5 or more years remaining may apply to change the compliance timeline to make compliance more feasible by timing it to coincide with the refinancing the building, or other similar reasons. To adjust the timeline the owner of a covered building must submit a retrofit plan addressing planned project dates including an energy model showing the results of the future planned project and how and when it meets the required EUI reduction targets. CASR will support under-resourced buildings in developing the retrofit plan.
- C. Target Adjustment:** The owner of a covered building may apply to adjust the final energy performance target of a building to account for significant variations in operations of the building or inherent characteristics of the building itself that make achieving the target challenging. To adjust the target the owner of a covered building must submit an application that includes the following:

 - i. The proposed final energy performance target EUI based on an analysis or energy model from a professional engineer with details and narrative explaining why the building cannot meet the target assigned to its group and why the new target represents the maximum energy performance, from energy efficiency and solar on-site or off-site, possible for the building.
- D. Prescriptive Option:** For buildings 25,000-100,000 square feet a prescriptive option will be available to comply in 2024 and 2027 to comply with interim energy performance targets. The prescriptive option requires the owner of a covered building to do both of the following:

 - i. Demonstrate they have electrified at least 70% of heating and water heating equipment load, and
 - ii. Verify the building has all LED lights by submitting the installation year for LEDs, listing the type of original lighting and then show LEDs were installed, or a

certificate from a lighting professional verifying all lights are LED's.

E. Manufacturing/Agricultural Option:

The owner of a covered building where the primary use is manufacturing or agricultural processes must apply for a Manufacturing/Agricultural designation. This designation is only available if the manufacturing or agricultural process uses significant energy, which means a building in which more than half of the gross floor area is used for manufacturing or agricultural purposes. Distribution centers and warehouses DO NOT qualify unless more than half of the gross floor area is used for manufacturing or agricultural purposes.

The details on the rules for how these buildings will save 30% by 2030 shall be developed by CASR by December 1st, 2023 with input from manufacturing and agricultural stakeholders.

4.6 Demonstration of Compliance

A. Reporting

Owners of covered buildings with a gross floor area equal or greater than twenty-five thousand (25,000) square feet shall demonstrate that the weather normalized site energy use intensity (EUI) of the building is less than or equal to the target set for that building. Using the ENERGY STAR Portfolio Manager tool, or other platforms as CASR may designate, to report to the office of climate action, sustainability, and resiliency the following.

- i. To meet the interim energy performance target for calendar year 2024 a building must be at or below that target in the benchmarking reports due on:
 - a. June 1, 2025
 - b. June 1, 2026
 - c. June 1, 2027
- ii. To meet the interim energy performance target for calendar year 2027 a building must be at or below that target in the benchmarking reports due on:
 - a. June 1, 2028
 - b. June 1, 2029
 - c. June 1, 2030
- iii. To meet the final energy performance target for calendar year 2030 a building must be at or below that target in the benchmarking reports due on:
 - a. June 1, 2031
 - b. All subsequent years.
- iv. If a covered building is exempt from benchmarking in a given compliance year then it must comply through an alternate compliance option unless it already met the last interim compliance target and intend to meet the next compliance target.

B. Solar

The Solar power generation on-site or off-site, as measured in kWh delivered to the grid by the system, will be fully credited towards energy use, lowering the EUI. To report Solar generation a building owner shall submit one of the following:

- i. For on-site solar panels the kWhs generated each year shall be reported along with proof that the solar panels are installed in the form of a bill from the solar developer or other means.
- ii. For offsite solar generation, owners of covered buildings will self-certify and upload proof that they have an off-site solar capacity contract or that they own off-site solar panels.
 - a. For off-site solar owned by the building owner, proof of ownership must be submitted in addition to the kWh delivered each year under the contract.
 - b. For off-site solar, the building owner must provide evidence of a subscription, lease, or purchase of a share in either a voluntary renewable energy program offered by Xcel Energy or a community solar project for which a dedicated renewable energy resource located in Public Service Company of Colorado territory is built for that customer program, and which has dedicated customer capacity or energy to fulfill that customer's subscription. The term of purchase must be at least five (5) years and must be renewed a minimum of every five (5) years for the life of the building for purposes of compliance with this rule. In addition to self certification of the contract the kWh delivered each year under the contract shall be reported.

4.7 Disclosure upon sale.

The owner of a covered building shall disclose the covered building's compliance status, including all performance targets, any approved alternate compliance pathways, and any penalties assessed, to a prospective buyer prior to the sale of the building. The owner shall disclose to all prospective buyers the covered building's compliance status in all documentation or advertising concerning the sale of the covered building including, but not limited to, any listings, notices, advertisements of sale, term sheets, and contracts of sale.

SECTION 5 – REQUIREMENTS FOR EXISTING BUILDING PERFORMANCE FOR COVERED BUILDINGS WITH A GROSS FLOOR AREA OF 5,000-24,999 SQUARE FEET

5.1 Small Building Requirements

Owners of covered buildings with a gross floor area of 5,000-24,999 square feet shall either certify that they have installed all LED lights or that they have achieved an equivalent lighting power density to what all LEDs would have resulted in. Alternatively, owners of covered buildings may install solar panels or purchase off-site solar that generates enough electricity to meet 20% of the building's annual energy usage.

5.2 Compliance Schedule

Owners of covered buildings will be required to comply by the following schedule:

- A. December 31, 2025: buildings 15,001-24,999 square feet

- B. December 31, 2026: buildings 10,001-15,000 square feet
- C. December 31, 2027: buildings 5,000-10,000 square feet

5.2 Demonstration of Compliance

A. Lighting

Owners of covered buildings must certify that they have installed all LED lights or that they have achieved an equivalent lighting power density to what all LEDs would have resulted in.

B. Solar

To demonstrate that a building has installed solar panels or purchased off-site solar that generates enough electricity to meet 20% of the building's annual energy usage the building owner shall submit total energy use in the building for one calendar year and demonstrate that solar generation has met 20% of that generation by submitting one of the following:

1. For on-site solar panels, the kWh's generated each year shall be reported along with proof that the solar panels were installed in the form of a bill from the solar developer or other means.
2. For offsite solar generation, owners of covered buildings will self-certify and upload proof that they have an off-site solar capacity contract or that they own off-site solar panels. For off-site solar, the building owner must provide evidence of a subscription, lease, or purchase of a share in either a voluntary renewable energy program offered by Xcel Energy or a community solar project for which a dedicated renewable energy resource located in Public Service Company of Colorado territory is built for that customer program, and which has dedicated customer capacity or energy to fulfill that customer's subscription. The term of purchase must be at least five (5) years.

SECTION 6 – ENFORCEMENT AND PENALTIES

- 6.1** CASR will notify an Owner of errors in data the Owner has submitted to CASR, including but not limited to, energy use data, solar generation and capacity, use attributes, building information, calculations, or results. The Owner shall correct such errors, submit the updated report to CASR, and notify CASR of the updated submission. Failure to correct the errors or failure to submit a report shall be a violation of this rule.
- 6.2** It is unlawful for any person to violate any provision of this rule.
- 6.3** The executive director, or the executive director's designee, is empowered to enforce the provisions of this rule.
- 6.4** The requirements of this rule apply to all agents, successors and assigns of an owner.
- 6.5** The executive director, or the executive director's designee, may issue notices or orders for violations of this rule. Any covered building owner who violates any provision of this rule is

subject to a civil penalty amount of up to \$0.70 per year for each required kBtu reduction that the owner's covered building fails to achieve in that year.

- 6.6** If a covered building owner subject to the civil penalty above fails to pay the required amount within one hundred eighty (180) days, the civil penalty will be considered a debt to the city until paid in full. The debt is a perpetual lien on the property, and is superior and prior to all other liens, regardless of their dates of recordation, except for liens for general taxes and prior special assessments, until the civil penalty owed, delinquent interest, and recording fees have been paid in full. In addition to the remedies set forth in this section, an action or other process provided by law may be maintained by the city to recover or collect any amounts, including interest, owing under this section. Interest is calculated in the same manner and same amount as delinquent property taxes. The executive director must record the lien with the clerk and recorder.