

CITY AND COUNTY OF DENVER

Building Typology and EUI Targets

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1 EXECUTIVE SUMMARY

In September 2021, the Energize Denver Task Force made recommendations to the City and County of Denver that would reduce Denver’s greenhouse gas emissions 49% by 2040. As part of those suggestions, the Task Force recommended setting Energy Use Intensity (EUI) targets for each building type in the City. The goal of the EUI reduction targets is to achieve at least 30% total energy savings across all buildings 25,000 SF and greater (hereafter large buildings) by 2030.

Group14 conducted an analysis of all the benchmarked buildings in Denver and reviewed national EUI data available through the 2012 Commercial Building Energy Consumption Survey (CBECS) to determine a building typology list and a target EUI for each building type in the City. Buildings with similar functions, operating hours, and median EUIs were assigned the same target EUI. For example, in Energy Star Portfolio Manager (ESPM) both Retail Store and Wholesale Club/ Supercenter are a property type option but both property types reference the retail store data set in CBECS. In this example, the target EUI for both a Retail Store and a Wholesale Club/ Supercenter are the same.

The table below lists the available Energy Star Property types and the City of Denver’s Target EUI for that category.

Table 1: City and County of Denver Building Types and EUI Target Matrix

| Primary Property Type - EPA Calculated | Target EUI |
|---|-------------------|
| Adult Education | 37.2 |
| Ambulatory Surgical Center | 60.7 |
| Aquarium | 30% EUI Reduction |
| Automobile Dealership | 42.8 |
| Bank Branch | 63.6 |
| Bar/Nightclub | 86.6 |
| Barracks | 46.3 |
| Bowling Alley | 50.5 |
| College/University | 60.6 |
| Convention Center | 30% EUI Reduction |
| Courthouse | 51.2 |
| Data Center | 30% EUI Reduction |
| Distribution Center | 25.4 |
| Drinking Water Treatment & Distribution | 30% EUI Reduction |
| Enclosed Mall | 45.6 |
| Energy/Power Station | 30% EUI Reduction |
| Fast Food Restaurant | 311.3 |
| Financial Office | 48.3 |
| Fire Station | 45.6 |
| Fitness Center/Health Club/Gym | 50.5 |
| Food Sales | 144.3 |
| Food Service | 76.9 |
| Hospital (General Medical & Surgical) | 165.2 |
| Hotel | 61.1 |



| Primary Property Type - EPA Calculated | Target EUI |
|---|-------------------|
| Ice/Curling Rink | 30% EUI Reduction |
| Indoor Arena | 53.2 |
| K-12 School | 48.0 |
| Laboratory | 153.9 |
| Library | 52.9 |
| Lifestyle Center | 66.6 |
| Mailing Center/Post Office | 46.5 |
| Medical Office | 69.0 |
| Movie Theater | 53.2 |
| Multifamily Housing | 44.2 |
| Museum | 30% EUI Reduction |
| Non-Refrigerated Warehouse | 27.2 |
| Office | 48.3 |
| Other | 49.2 |
| Other - Education | 37.2 |
| Other - Entertainment/Public Assembly | 53.2 |
| Other - Lodging/Residential | 51.3 |
| Other - Mall | 60.3 |
| Other - Public Services | 49.2 |
| Other - Recreation | 50.5 |
| Other - Restaurant/Bar | 194.1 |
| Other - Services | 34.6 |
| Other - Specialty Hospital | 165.2 |
| Other - Technology/Science | 49.2 |
| Other - Utility | 30% EUI Reduction |
| Outpatient Rehabilitation/Physical Therapy | 60.7 |
| Parking | 30% EUI Reduction |
| Performing Arts | 53.2 |
| Personal Services (Health/Beauty, Dry Cleaning, etc.) | 34.6 |
| Police Station | 45.6 |
| Pre-school/Daycare | 38.9 |
| Prison/Incarceration | 83.0 |
| Refrigerated Warehouse | 63.9 |
| Repair Services (Vehicle, Shoe, Locksmith, etc.) | 32.3 |
| Residence Hall/Dormitory | 46.3 |
| Residential Care Facility | 63.3 |
| Restaurant | 194.1 |
| Retail Store | 43.5 |
| Roller Rink | 50.5 |
| Self-Storage Facility | 7.7 |
| Senior Care Community | 63.3 |
| Senior Living Community | 63.3 |



| Primary Property Type - EPA Calculated | Target EUI |
|--|-------------------|
| Social/Meeting Hall | 33.0 |
| Stadium (Closed) | 75.3 |
| Stadium (Open) | 75.3 |
| Strip Mall | 66.6 |
| Supermarket/Grocery Store | 164.4 |
| Swimming Pool | 30% EUI Reduction |
| Transportation Terminal/Station | 75.3 |
| Urgent Care/Clinic/Other Outpatient | 60.7 |
| Veterinary Office | 60.7 |
| Vocational School | 37.2 |
| Wastewater Treatment Plant | 30% EUI Reduction |
| Wholesale Club/Supercenter | 43.5 |
| Worship Facility | 42.1 |
| Zoo | 30% EUI Reduction |

To meet the City’s goal of at least 30% energy savings across all large existing buildings by 2030, the EUI targets must be the equivalent to the 15th percentile performer in each building category. Mixed use properties will have a custom weighted EUI target based on the various building activities. For unique building types, an EUI reduction of 30% is recommended to meet the City’s goal.

2 METHODOLOGY

2.1 Determining the Building Types

This section will review how the building types were grouped and selected.

2.1.1 Standard Building Types

To determine the City’s Building Typology List, Group14 started with the Property Types listed in Energy Star Portfolio Manager (ESPM). The ESPM platform is currently used by the City for annual benchmarking of all large buildings and will continue to be used for reporting of weather normalized EUIs for the Energize Denver policy. [ESPM](#) has 83 unique property types applicable to Denver’s large building stock. For most property types, ESPM references the Commercial Building Energy Consumption Survey (CBECS) for the median national EUI.

[CBECS](#) is a national sample survey conducted by the U.S. Department of Energy’s Energy Information Administration. CBECS buildings are classified according to principal activity, which is the primary business, commerce, or function carried on within each building. Buildings used for more than one of these activities are assigned to the activity occupying the most floorspace.

CBECS provides consumption and expenditure data for buildings divided into 20 principal building activity categories. However, in the CBECS microdata set the buildings are further broken down into 53 more specific building activities. By reviewing the building type functions, typical operating hours, and median EUIs in the CBECS microdata, the 82 ESPM property types present in Denver were grouped into 55 building types. The definitions for each building type, and the subtypes they include, can be found in Appendix A. The reference data set for each building type can be found in Appendix B.



2.1.2 Unique Building Types

There were several buildings that did not fall into one of the standard building types found in CBECS and did not have another national dataset readily available. These buildings were determined to have unique functions and operating conditions. In some cases, these building types were included in CBECS but were group in broader categories. For example, the CBECS Entertainment/ Culture category includes museums, theaters, movie theaters, sports arenas, and night clubs. While these buildings all fall into the entertainment and culture category, the operating conditions and needs of a museum are vastly different from an open-air stadium. As a result, the following building types were determined to be unique:

- Aquariums
- Convention Centers
- Data Centers
- Fitness Center/Health Club/Gym with Pool
- Ice/Curling Rinks
- Museums
- Parking
- Utility
- Zoos

2.2 Setting the EUI Targets

This section covers the analysis used to determine the target EUIs for each building type.

2.2.1 Standard Building Types

In March of 2021, New Buildings Institute (NBI) conducted an analysis to determine the required savings needed to achieve 30% energy savings across all large buildings in the City. Their analysis revealed that all large buildings in the City must perform at the same efficiency as the 15th percentile performer in order to achieve this level of reduction. The 15th percentile performer means that 85% of the buildings in this building type use more energy per square foot. Group14 used this a starting point to determine the target EUI for each building type.

Denver's 2019 Benchmarking data was used to determine the 15th percentile for each building type. The data set Group14 used had been checked for quality assurance by both the City and NBI. The data set included 2,225 benchmarked buildings out of the 3,400 buildings listed in the City assessor's data as 25,000 SF or greater. Each building in the data set had a "Primary Property Type" from ESPM. This information was used to categorize the buildings into one of the 55 building types.

Summarizing the benchmarking data by building type allowed Group14 to determine the appropriate EUI target for each type. The following methodologies were used to determine EUI targets:

1. **Building Types with Greater than 25 Buildings** - For building types that include 25 or more large buildings in the Denver data set, the EUI target was set based on the 15th percentile weather normalized EUI for that building type. There were 17 out of the 55 types that had enough buildings in Denver to use this methodology.
2. **Building Types with Less than 25 Buildings** – For the remaining 38 categories with fewer than 25 large buildings in the Denver data set, the 2012 CBECS data was utilized to determine the target EUI. To set the target EUI for these buildings, a 30% savings rate was applied to the regionally adjusted 2012 CBECS Median EUI for each building type.

Regional Adjustment Description: The CBECS EUI data is provided by region and by building type separately but not with both factors combined. To account for the impacts of weather in the Mountain region, a regional weighting was developed by dividing the median EUI for all buildings nationwide by the



median EUI for all buildings in the Mountain region. This equated to a regional weighting of 103% indicating higher energy use in the Mountain region due to the cold winter heating load. The Mountain region weighting was then applied to the end-use EUIs for each building type to account for both building type and weather.

2.2.2 Mixed Use Building

For mixed-use buildings, the City will work with the building owner/manager to calculate a weighted EUI target based on the various building activities.

2.2.3 Unique Buildings

Based on the energy savings analysis, in order to meet the City goal, a savings rate of 30% is recommended for all unique building types. The City will work with individual buildings to determine their final EUI target.

2.2.4 Manufacturing and Agricultural Buildings

A target EUI has not be set for manufacturing and agricultural stakeholders at this time. The details on the rules for how these buildings will save 30% by 2030 shall be developed by the Office of Climate Action, Sustainability, and Resiliency (CASR).

2.2.5 Energy Savings

The savings potential was calculated for achieving EUI targets at the 15th percentile, 20th percentile, and the 25th percentile of standard building performers. The table below shows the total number of buildings meeting their target EUI and the energy savings that would be achieved at various levels of compliance.

At the 15th percentile, if **every** standard and unique large building in the City meets their EUI target the total building energy use across the City would be reduced by 33%. It should be noted, this analysis does not include the mix used properties or the manufacturing/ industrial properties.

Table 2: Energy Savings Potential

| Buildings Meeting Target | # of Buildings | 15th Percentile | 20th Percentile | 25th Percentile |
|---|----------------|-----------------|-----------------|-----------------|
| 50% of In Compliance Buildings | 1,149 | 13% | 12% | 11% |
| 75% of In Compliance Buildings | 1,724 | 20% | 18% | 16% |
| 90% of In Compliance Buildings | 2,068 | 24% | 21% | 20% |
| All In Compliance Buildings | 2,298 | 26% | 24% | 22% |
| All In and Out of Compliance Buildings | 2,729 | 31% | 28% | 25% |
| All Buildings (including exempt) ¹ | 3,007 | 33% | 29% | 27% |

¹There are only 3,007 buildings 25,000 SF and greater in the 2019 benchmarking data. However, the City Assessor data from 2021, shows 3,400 buildings 25,000 SF or greater.



APPENDIX A – BUILDING TYPE GLOSSARY

The following definitions from Energy Star Portfolio Manager have been modified to meet the City of Denver Building Typology List.

Banking/ Financial Services

Bank Branch

Bank Branch refers to a commercial banking outlet that offers banking services to walk-in customers.

Education

College/ University

College/University refers to buildings used for the purpose of higher education. This includes public and private colleges and universities. This category should not be used for cafeterias, laboratories, dormitories, etc. This is for educational and teaching buildings only.

K-12

K-12 School refers to buildings or campuses used as a school for Kindergarten through 12th grade students. This does not include college or university classroom facilities/laboratories, vocational, technical, trade, adult or continuing education schools, preschool, or day care.

If the school serves any of the above student populations (e.g., an elementary school that includes pre-kindergarten), at least 75% of the students must be in grades kindergarten through 12.

Preschool/ Daycare

Preschool/Daycare applies to buildings used for educational programs or daytime supervision/recreation for young children before they attend Kindergarten.

Other – Education

Other – Education refers to buildings used for religious, community, or other educational purposes not described above (i.e. educational purposes other than college/university, K-12 school, and pre-school/daycare). This includes Adult Education and Vocational Schools.

Entertainment/ Public Assembly

Aquarium

Aquarium refers to buildings used to provide aquatic habitat primarily to live animals and which may include public or private viewing areas and educational programs.

Convention Center

Convention center refers to buildings used primarily for large conferences, exhibitions, and similar events. Convention centers may include a diverse variety of spaces, including large exhibition halls, meeting rooms, and concession stands.



Conference facilities located within a Hotel should be included along with your Hotel property use details, rather than added as a separate Convention Center property use. Conference facilities primarily serving smaller meetings should be entered as Social/Meeting Hall.

Entertainment/ culture

Entertainment/Culture refers to buildings whose primary use is for entertainment or public gatherings and can include Casinos, Indoor Arenas, Movie Theaters, and Performing Art Centers.

Museums

Museum refers to buildings that display collections to outside visitors for public viewing and enjoyment and for informational/educational purposes.

Recreation Center

Recreation Center refers to buildings used for recreational or professional athletic training and related activities. This includes gyms, health clubs, fitness centers, roller rinks, bowling alleys, etc.

Recreation Center with Pool

Recreation Center with Pool refers to buildings used for recreational or professional athletic training and related activities and includes a swimming pool or aquatic center

Social/ Meeting Hall

Social/Meeting Hall refers to buildings primarily used for public or private gatherings. This may include community group meetings, seminars, workshops, or performances. Please note that there is another property use available, Convention Center, for large exhibition and conference facilities.

Stadium

Stadium refers to structures used primarily for professional or collegiate sports and entertainment events in which the playing field is either covered with a permanent or retractable roof or is exposed to the outside. Examples of events held in open stadiums include baseball, football, and soccer games, and concerts. Open Stadiums usually have capacities of 5,000 seats or more and are often characterized by multiple concourses and concession areas.

Zoo

Zoo refers to buildings used primarily to provide habitat to live animals and which may include public or private viewing and educational programs.

Food Sales & Services

Bar/Nightclub

Bar/Nightclub refers to buildings used primarily for social/entertainment purposes and is characterized by most of the revenue being generated from the sale of beverages instead of food.

Properties whose primary business revenues are generated from the sale of food should be entered using one of the Restaurant property uses, even if there is a bar.

Fast Food Restaurant



Fast Food Restaurant, also known as Quick Service Restaurant, refers to buildings used for the preparation and sale of ready-to-eat food. Fast Food Restaurants are characterized by a limited menu of food prepared quickly (often within a few minutes), and sometimes cooked in bulk in advance and kept hot.

Food Sales

Food Sales refers to buildings used for the sale of food on either a retail or wholesale basis, but which do not meet the definition of Supermarket/Grocery Store. For example, specialty food sales like a cheese shop or butcher.

Food Service

Food Service refers to buildings used for preparation and sale of food and beverages, but which do not meet the definition of Restaurant or Bar/Nightclub. For example, a bakery or coffee shop.

Restaurant

Restaurant refers to buildings used for preparation and sale of ready-to-eat food and beverages, but which do not fit in the fast food property type. Examples include fast casual, casual, and fine dining restaurants.

Supermarket/ Grocery Store

Supermarket/Grocery Store refers to buildings used for the retail sale of primarily food and beverage products, and which may include small amounts of preparation and sale of ready-to-eat food. Buildings where the primary business is the onsite preparation and sale of ready-to-eat food should use either the Restaurant, Food Service, or Food Sales property types.

Healthcare

Clinic/ Outpatient

Clinic/Other Outpatient refers to buildings used to treat patients, provide diagnosis, and treatment. These include Ambulatory Surgical Centers, Clinics, Outpatient Rehabilitation/Physical Therapy, Urgent Care, and Veterinary Offices.

Hospital/ Inpatient

Hospital/Inpatient refers to a general medical and surgical hospital (including critical access hospitals and children's hospitals). These facilities provide acute care services including emergency medical care, physician's office services, diagnostic care, ambulatory care, surgical care, and limited specialty services such as rehabilitation and cancer care. Hospitals must have in-patient beds and offer overnight care.

To be eligible for the Hospital Property Type:

- More than 50% of the GFA of all buildings must be used for general medical and surgical services (not long-term acute care, specialty care, or ambulatory surgical services).
- More than 50% of the licensed beds must provide acute care services.

Medical Office (Diagnostic)

Medical Office refers to buildings used to provide diagnosis and treatment for medical, dental, or psychiatric outpatient care.



Lodging/ Residential

Dormitories

Residence Hall/Dormitory refers to buildings associated with educational institutions or military facilities which offer multiple accommodations for long-term residents.

Hotel/ Motel

Hotel refers to buildings renting overnight accommodations on a room/suite and nightly basis, and typically include a bath/shower and other facilities in guest rooms. Hotel properties typically have daily services available to guests including housekeeping/laundry and a front desk/concierge.

Hotel does not apply to properties where more than 50% of the floor area is occupied by fractional ownership units such as condominiums or vacation timeshares, or to private residences that are rented out on a daily or weekly basis. Hotel properties should be majority-owned by a single entity and have rooms available on a nightly basis. Condominiums or Timeshares should select the Multifamily Housing property use.

Multifamily Housing

Multifamily Housing refers to residential properties that contain two or more residential living units. These properties may include low-rise buildings (1-4 stories), mid-rise buildings (5-9 stories), or high-rise buildings (10+ stories). Occupants of these buildings may include tenants, cooperators, and/or individual owners.

Other – Lodging

Other – Lodging/Residential refers to buildings used for residential purposes other than those described in the available building types. One example would be a homeless shelter.

Senior Living/Residential Care

Senior Living Community refers to buildings that house and provide care and assistance for elderly residents, specifically homes (skilled nursing facilities) and assisted living facilities. It is **NOT** intended for retirement or other senior communities that offer only independent living – a community with only independent living should benchmark as a Multifamily property.

Residential Care Facilities refers to buildings that provide rehabilitative and restorative care to patients on a long-term or permanent basis. Residential Care Facilities treat mental health issues, substance abuse, and rehabilitation for injury, illness, and disabilities. This property type is intended for facilities that offer long-term residential care to residents of all ages who may be in need of assistance with activities of daily living.

Manufacturing/ Industrial

Manufacturing/Industrial Plant refers to buildings used for manufacturing or assembling goods. Typically, a Manufacturing/Industrial plant includes a main production area that has high-ceilings and contains heavy equipment used for assembly line production.

Office

Office refers to buildings used to conduct commercial or governmental business activities. This includes administrative and professional offices, government offices, and financial offices.



Parking

Parking refers to buildings and lots used for parking vehicles. This includes open parking lots, partially enclosed parking structures, and completely enclosed (or underground) parking structures. Parking structures may be free standing or physically connected to the property. Individual private garages in Multifamily Housing are not considered Parking.

Public Service

Courthouse

Courthouse refers to buildings used for federal, state, or local courts, and associated administrative office space.

Fire Station/ Police Station

Fire Station refers to buildings used to provide emergency response services associated with fires. Fire stations may be staffed by either volunteer or full-time paid firemen.

Police Station applies to buildings used for federal, state, or local police forces and their associated office space.

Library

Library refers to buildings used to store and manage collections of literary and artistic materials such as books, periodicals, newspapers, films, etc. that can be used for reference or lending.

Mailing Center/ Post Office

Mailing Center/Post Office refers to buildings used as retail establishments dedicated to mail and mailing supplies. This includes U.S. Post Offices, in addition to private retailers that offer priority mail services and mailing supplies.

Prison/ Incarceration

Prison/Incarceration refers to federal, state, local, or private-sector buildings used for the detention of persons awaiting trial or convicted of crimes.

Transportation Terminal/ Station

Transportation Terminal/Station applies to buildings used primarily for accessing public or private transportation. This includes train stations, bus stations, airports, and seaports. These terminals include areas for ticket purchases, and embarkation/disembarkation, and may also include public waiting areas with restaurants and other concessions.

Worship Facility

Worship Facility refers to buildings that are used as places of worship. This includes churches, temples, mosques, synagogues, meetinghouses, or any other buildings that primarily function as a place of religious worship.



Retail

Automobile Dealership

Automobile Dealership refers to buildings used for the sale of new or used cars and light trucks.

Enclosed Mall

Enclosed Mall refers to buildings that house multiple stores, often “anchored” by one or more department stores, and with interior walkways. Most stores will not have entrances accessible from outside, with the exception of the “anchor” stores.

Other – Mall

Other – Mall refers to buildings containing a collection of stores whose purpose is the sale of goods, but which do not fit into the enclosed mall or strip mall property types.

Retail Store

Retail Store refers to individual stores used to conduct the retail sale of non-food consumer goods such as Department Stores, Discount Stores, Drug Stores, Dollar Stores, Hardware Stores, and Apparel/Specialty Stores (e.g. books, clothing, office products, sporting goods, toys, home goods, and electronics). Buildings containing multiple stores should be classified as enclosed mall or strip mall.

Strip Mall

Strip mall refers to buildings comprising more than one retail store, restaurant, or other business, in an open-air configuration where each establishment has an exterior entrance to the public and there are no internal walkways.

Service

Repair Shop

Repair Services refers to buildings in which some type of repair service is provided. Examples include shoe repair, jewelry repair, locksmiths, etc.

Vehicle Service/ Repair Shop

Vehicle Service/ Repair Shop refers to buildings in which vehicle service and repairs are provided.

Other Service

Other Services refers to buildings used to sell services rather than physical goods. Examples include dry cleaners, salons, spas, etc.

Technology/ Science

Data Centers

Data Center refers to buildings specifically designed and equipped to meet the needs of high-density computing equipment, such as server racks, used for data storage and processing. Typically, these facilities require dedicated uninterruptible power supplies and cooling systems. Data center functions may include traditional



enterprise services, on-demand enterprise services, high performance computing, internet facilities, and/or hosting facilities.

Often Data Centers are free standing, mission critical computing centers. When a data center is located within a larger building, it will usually have its own power and cooling systems and require a constant power load of 75 kW or more. Data Center is intended for sophisticated computing and server functions; it should not be used to represent a server closet or computer training area.

Laboratory

Laboratory refers to buildings that provide controlled conditions in which scientific research, measurement, and experiments are performed or practical science is taught.

Utility

Utility applies to buildings used by a utility such as an energy/power station, wastewater treatment plant, and a drinking water treatment plant.

Warehouse/ Storage

Distribution/ Shipping Center

Distribution Center refers to unrefrigerated buildings that are used for the temporary storage and redistribution of goods, manufactured products, merchandise or raw materials. Buildings that are used primarily for assembling, modifying, manufacturing, or growing goods, products, merchandise or raw material should be classified as Manufacturing Facility.

Non-Refrigerated Warehouse

Non-Refrigerated Warehouse refers to unrefrigerated buildings that are used to store goods, manufactured products, merchandise or raw materials. Buildings that are used primarily for assembling, modifying, manufacturing, or growing goods, products, merchandise or raw material should be classified as Manufacturing Facility.

Refrigerated Warehouse

Refrigerated Warehouse refers to refrigerated buildings that are used to store or redistribute perishable goods or merchandise under refrigeration at temperatures below 50 degrees Fahrenheit (10 degrees Celsius). Buildings that are used primarily for assembling, modifying, manufacturing, or growing goods, products, merchandise or raw material should be classified as Manufacturing Facility.

Self-storage

Self-Storage Facility refers to buildings that are used for private storage. Typically, a single Self Storage Facility will contain a variety of individual units that are rented out for the purpose of storing personal belongings.

Other

Other refers to buildings that do not fall within the available building types. Before selecting Other, it is highly recommended that you review the full list of property uses available for selection to ensure that there is not a suitable category for your property.



APPENDIX B – REFERENCE DATA

This section identifies the median EUI reference data used to determine the Building Typology List.

Table 3: Building Type Reference Data

| City of Denver Property Type | National Median EUI Data Source |
|--|--|
| Aquarium | A national EUI data set may be available through the Association of Zoos and Aquariums, but you must be a member to access benchmarking data. |
| Automobile Dealership/Showroom | CBECs - Vehicle dealership/ showroom |
| Bank Branch | CBECs - Bank/ Financial |
| Bar/Nightclub | CBECs - Bar/ Pub/ Lounge |
| Clinic/Outpatient | CBECs - Clinic/ Outpatient |
| College/University | CBECs - College/ University |
| Convention Center | |
| Courthouse | CBECs - Courthouse/Probation Office |
| Data Center | EPA - Data Center |
| Distribution Center | CBECs - Distribution Center/Shipping Center |
| Dormitories | CBECs - Dormitory/Fraternity/Sorority |
| Enclosed Mall | CBECs - Enclosed Mall |
| Entertainment/Culture | CBECs - Entertainment/Culture |
| Fast Food Restaurant | CBECs - Fast Food |
| Fire Station/Police Station | CBECs - Fire Station/Police Station |
| Fitness Center/Health Club/Gym | CBECs - Recreation |
| Fitness Center/Health Club/Gym with Pool | |
| Food Sales | CBECs - Other Food Sales |
| Food Service | CBECs - Other Food Service |
| Hospital/Inpatient | CBECs - Hospital/Inpatient Health |
| Hotel | CBECs - Hotel & Motel/Inn Average |
| Ice/Curling Rink | Energy Star (Canada) has a national data set but one does not exist for the US. This could be a potential reference when finalizing EUI targets. |
| K-12 School | CBECs - Elementary/Middle & High School Average |
| Laboratory | CBECs - Laboratory |
| Library | CBECs - Library |
| Mailing Center/Post Office | CBECs - Post Office/Postal center |
| Manufacturing/Industrial | |
| Medical Office (diagnostic) | CBECs - Medical Office (Diagnostic) |
| Mixed Use Property | |
| Multifamily Housing | Fannie Mae Industry Survey |
| Museum | |
| Non-Refrigerated Warehouse | CBECs - Non-Refrigerated Warehouse |



| City of Denver Property Type | National Median EUI Data Source |
|---------------------------------|---|
| Office | CBECS - Administrative/Professional Office |
| Other | CBECS - Other |
| Other - Education | CBECS - Elementary/Middle, High School, & Other Classroom Education Average |
| Other - Lodging | CBECS - Other Lodging |
| Other - Mall | CBECS - Enclosed Mall & Strip Shopping Mall Average |
| Other - Recreation | CBECS - Recreation |
| Parking | A national data set is not available for parking facilities. |
| Pre-school/Daycare | CBECS - Preschool |
| Prison/Incarceration | CBECS - Other Public Order and Safety |
| Refrigerated Warehouse | CBECS - Refrigerated Warehouse |
| Repair Shop | CBECS - Vehicle Service/Repair shop |
| Restaurant | CBECS - Restaurant/Cafeteria |
| Retail Store | CBECS - Retail Store |
| Self-Storage Facility | CBECS - Self-Storage |
| Senior Living/Residential Care | CBECS - Nursing Home/Assisted living |
| Service | CBECS - Other Service |
| Social/Meeting Hall | CBECS - Social/Meeting |
| Stadium (Closed) | CBECS - Other Public Assembly |
| Stadium (Open) | CBECS - Other Public Assembly |
| Strip Mall | CBECS - Strip Shopping Mall |
| Supermarket/Grocery Store | CBECS - Grocery Store/Food Market |
| Transportation Terminal/Station | CBECS - Other Public Assembly |
| Utility | CBECS - Other Public Assembly |
| Worship Facility | CBECS - Religious Worship |
| Zoo | A national EUI data set may be available through the Association of Zoos and Aquariums but you must be a member to access benchmarking data. This could be a potential reference when finalizing EUI targets. |