



CITY OF **ASPEN**

2026

City of Aspen

Building IQ Community Benchmarking Report

Created by the Community Office for
Resource Efficiency on behalf of the City of
Aspen to report on the benchmarking data
from 2021 through 2025.

September 2026
Aspen.gov/BuildingIQ



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What is Aspen Building IQ?

In 2022, the City of Aspen passed the Building IQ Ordinance to address emissions from existing commercial and multifamily buildings through a phased, two-part program: Benchmarking and Building Performance Standards (BPS).

What is the BIQ benchmarking program?

The first program resulting from the Aspen BIQ ordinance that benchmarks (tracks a building's energy and water use) and provides technical and financial support for building owners to improve their buildings.

Why is benchmarking important?

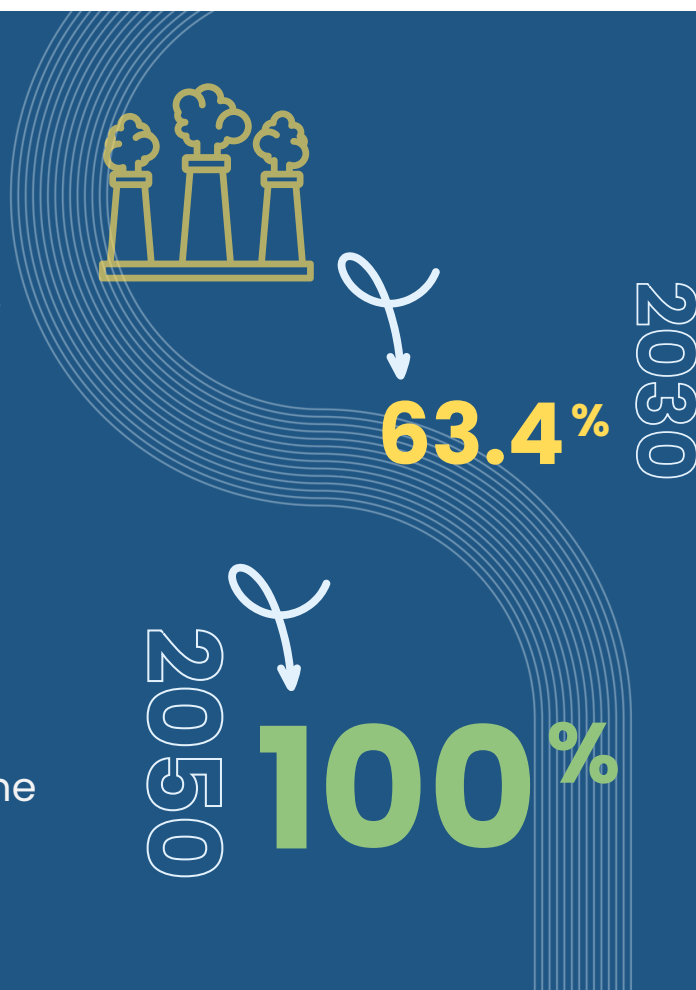
Benchmarking helps building owners identify the most impactful projects to optimize operations, improve resource efficiency and reduce emissions.

What is the goal?

Buildings account for 47% of Aspen's greenhouse gas emissions (GHGs).

Improving buildings is critical in reaching the City of Aspen's ambitious science-based targets of **63.4%** GHG reductions by 2030 and **100%** by 2050.

Research shows that the act of tracking energy and water use alone can lead to a 2-3% decrease in energy consumption.



How is the BIQ benchmarking program implemented?

The City of Aspen partners with the Community Office for Resource Efficiency (CORE), a 501(c)(3) nonprofit, to provide free benchmarking support to make it easy for property owners and managers to report energy and water usage and identify and implement energy efficiency projects.



What types of buildings are benchmarked?



Commercial buildings
5,000+ square feet



Multi-family buildings
15,000+ square feet

195

buildings

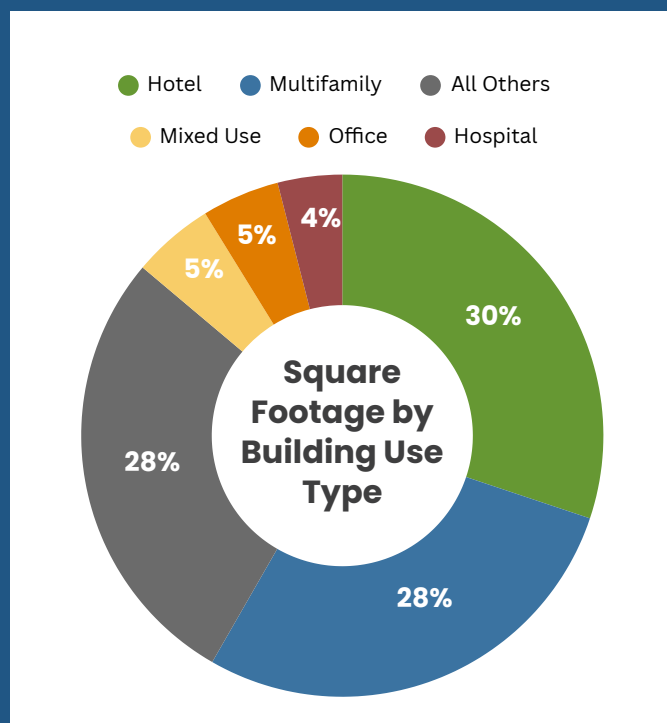
5.5

million sq. ft.

37%

of all building
stock in Aspen

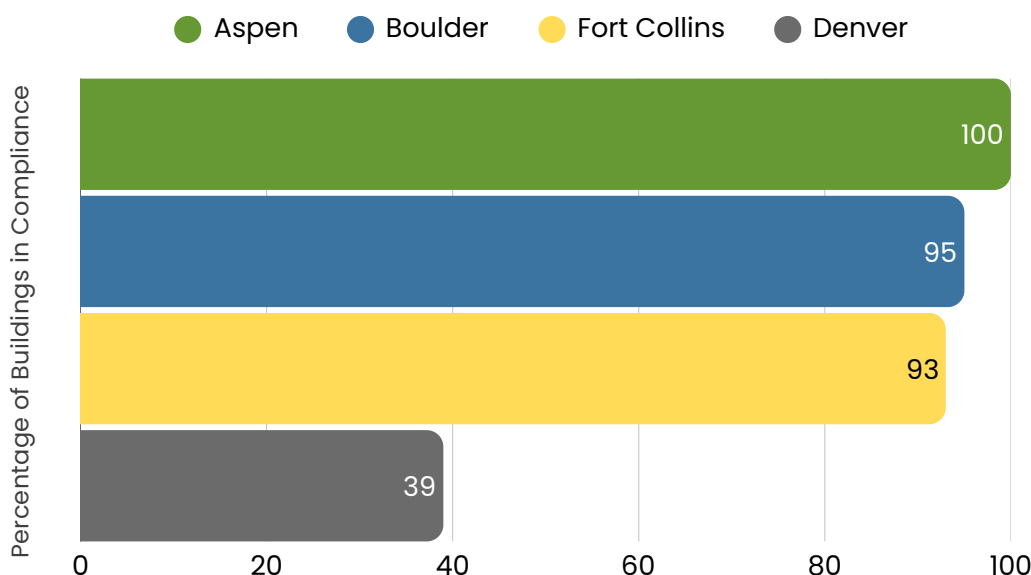
Hotels are the largest use type
by square footage.



Do most building owners comply with the BIQ program?

Aspen BIQ achieved **100% compliance** for all 2026 covered buildings in the benchmarking program, the highest rate for any city across the state.

Compliance Rates Across Colorado



CORE's efforts to partner with building owners to work through their reporting challenges is a key factor in Aspen being a leader in achieving high compliance.

These results show community support for building efficiency programs and the effectiveness of CORE's free benchmarking service.



The CORE Factor: An Innovative Approach

"By partnering with the Community Office for Resource Efficiency, the City of Aspen has achieved 100% compliance with its Building IQ ordinance. Achieving full compliance is no small feat, particularly given the level of outreach, technical assistance, and follow-up typically required to support building owners through the benchmarking process. Aspen's innovative approach offers a strong model for others to follow, expanding the City's bandwidth while providing direct, hands-on support to building owners throughout the reporting cycle."

~ Carolyn Sarno Goldthwaite, VP of Customer Engagement at Clearly Energy

What types of metrics are tracked?



EUI = Energy Use Intensity

The amount of energy used per square foot annually.



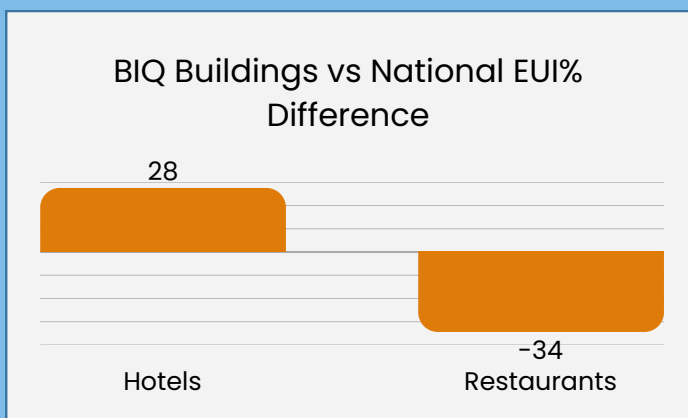
WUI = Water Use Intensity

The amount of water used per square foot annually.

Tracking metrics over time shows how a building compares to others of similar size or use type.

This helps identify which improvements will have the greatest impact and which properties need the most support.

Example: Analyzing Local and National EUIs for Insights

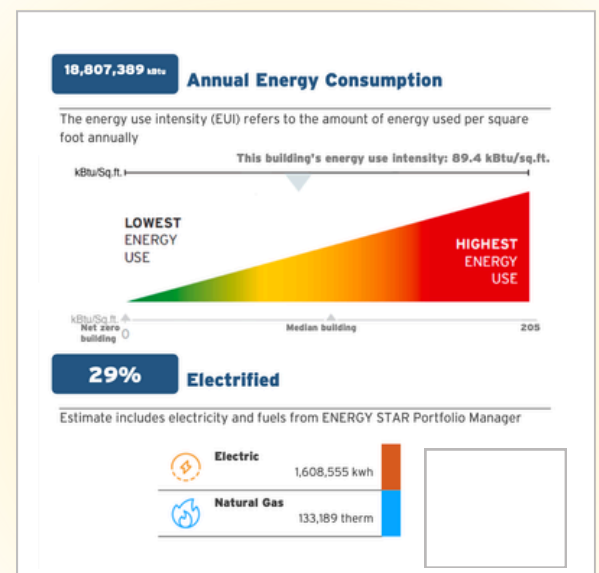


CORE uses many factors including EUI when choosing where to focus energy advising and project funding.

Overall, Aspen's hotels are higher than the national average EUI for their group while restaurants are lower. This guides CORE to prioritize hotels when analyzing individual building performance and offering support.

How do building owners learn about their metrics?

Building owners receive a score card every year with analysis of metrics and basic recommendations to improve efficiency. Building owners can meet with a CORE energy advisor to discuss their building's performance and optimization opportunities in more detail.



What's new this year?

High Performance Building Plans (HPBP)

From Building IQ Data to Building Action Plans

HPBPs are customized roadmaps created by CORE for buildings to achieve GHG emission reductions and improve energy efficiency. These plans empower building owners and managers to leverage the BIQ program for building improvements by:

- Assessing existing building performance and energy use
- Identifying specific building upgrade strategies for planning and budgeting



Which properties received HPBPs this year?

The St. Regis Aspen Resort
Dancing Bear Aspen
Aspen Community Church

White River Lodge
Eagles Club 184
Vectra Bank



"These reports will empower building owners to understand their properties better. When they are ready to pull the levers we've outlined for them, they have the details needed to take action."

– Ofek Bruhis
Project Manager at CORE

Result:

By using the HPBP's existing building model informed by BIQ data and a detailed on-site energy assessment, improvement strategies are identified and modeled for energy savings.

Building upgrades take time and resources. HPBP strategies are organized from simple to complex leading to full building decarbonization.

Can building owners receive funding for projects?

Yes! The City of Aspen has funding for BIQ participants to help them move from understanding their resource use to taking action to reduce their GHG emissions.

How much project funding will be distributed in 2026?

\$400K+

Grants and rebates estimated to be awarded to support projects at BIQ properties this year.

8

Commercial properties



2

Multifamily properties



140%

More funding expected to be awarded by CORE in 2026 compared to all previous BIQ funding combined. This demonstrates the City's and CORE's commitment to supporting projects that reduce emissions.

How does a building owner apply for funding?

CORE manages grants and rebates and guides BIQ participants through the application process for up to \$200,000 toward electrification and energy efficiency projects. Scan the QR code below to connect with CORE.



benchmarking@
aspencore.org

970.925.9775

Free technical support is available.

From planning a retrofit to improving performance of existing equipment, CORE partners with building managers to:

- Identify next steps
- Compare options
- Review proposals
- Move projects forward

What types of projects did the Aspen BIQ program fund this year?



Heating System Retrofit:

Upgrading aging HVAC systems is challenging. **Ajax Mountain Building** partnered with CORE to design and fund a cost-effective, energy-efficient dual-fuel heat pump system.

New Electrified Build:

White Elephant opened in 2026 at the site of the former Hotel Aspen on Main Street. Their redevelopment incorporated substantial electrification across 54 guestrooms and 3 employee affordable housing units to prevent and reduce greenhouse gas emissions.



Many of our employees are long time Aspen and Valley residents and have a vested interest in being responsible stewards of our home and the environment."

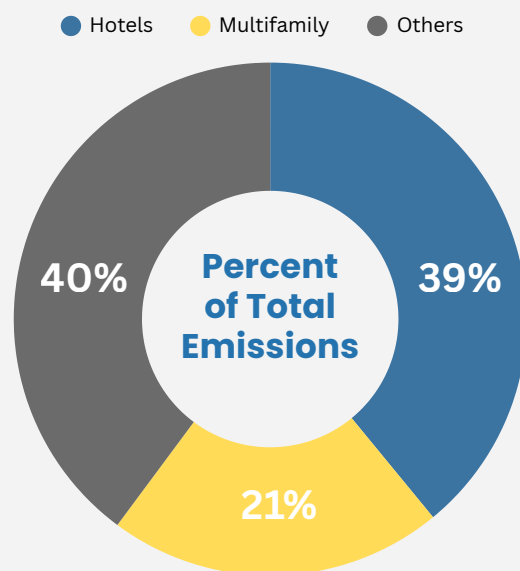
— **Todd Wilson**
Director of Engineering
for White Elephant

Which types of buildings have the highest emissions?

2 building types

60 % total emissions

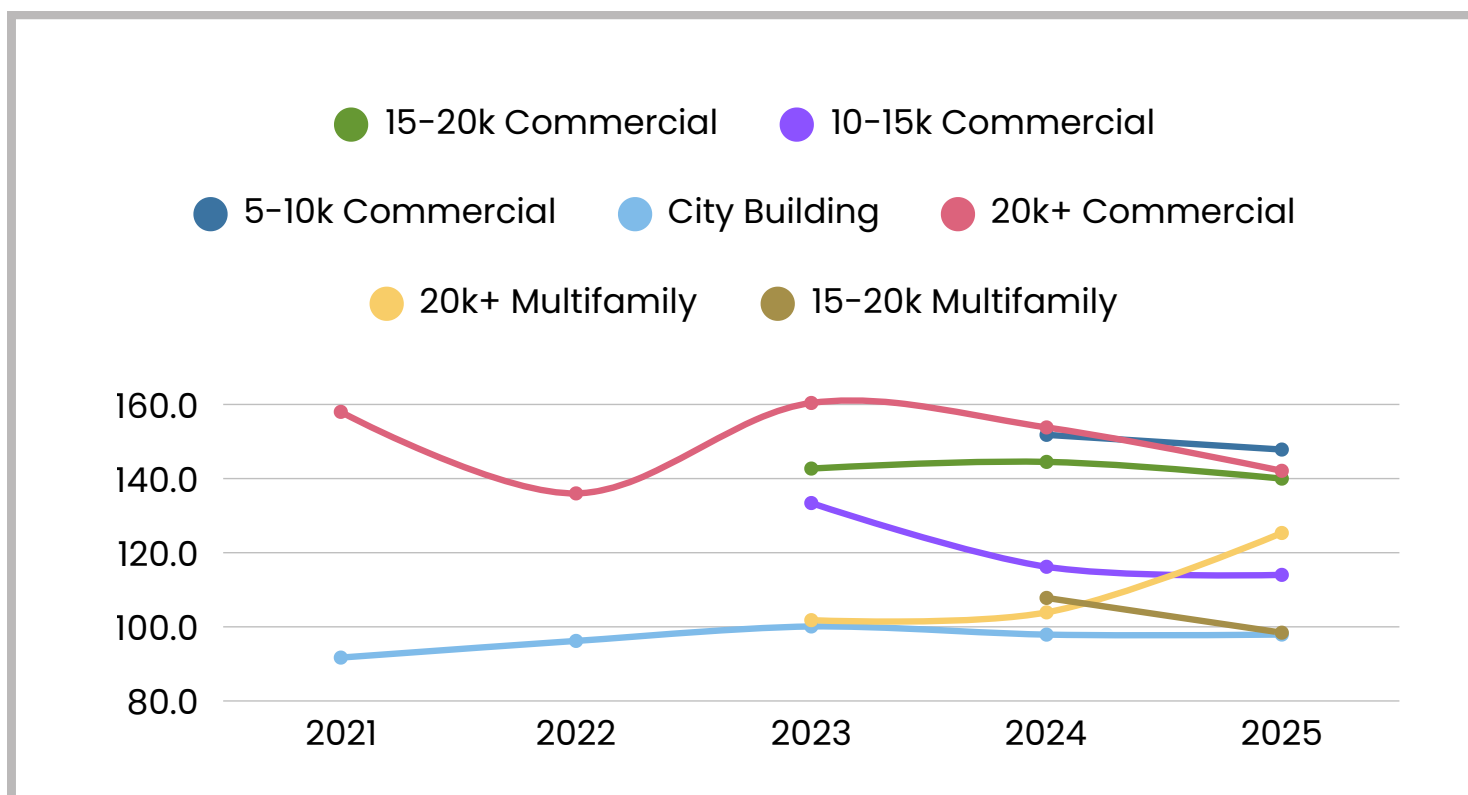
Hotels and multifamily buildings account for the bulk of emissions. CORE focuses on these use types for energy advising and high performance building plans.



How is Energy Use Intensity changing over time?

Commercial buildings in three benchmarking categories have the highest mean site EUIs. However, those over 20,000 square feet recorded their second consecutive year of declining values. Multifamily buildings over 20,000 square feet show an upward trend.

Mean Site EUI by Benchmarking Category

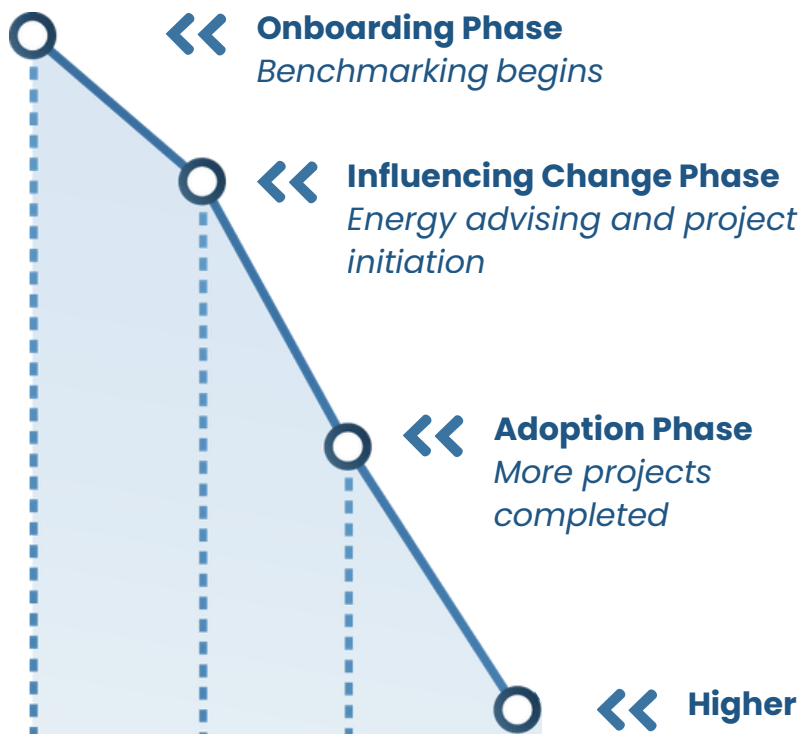
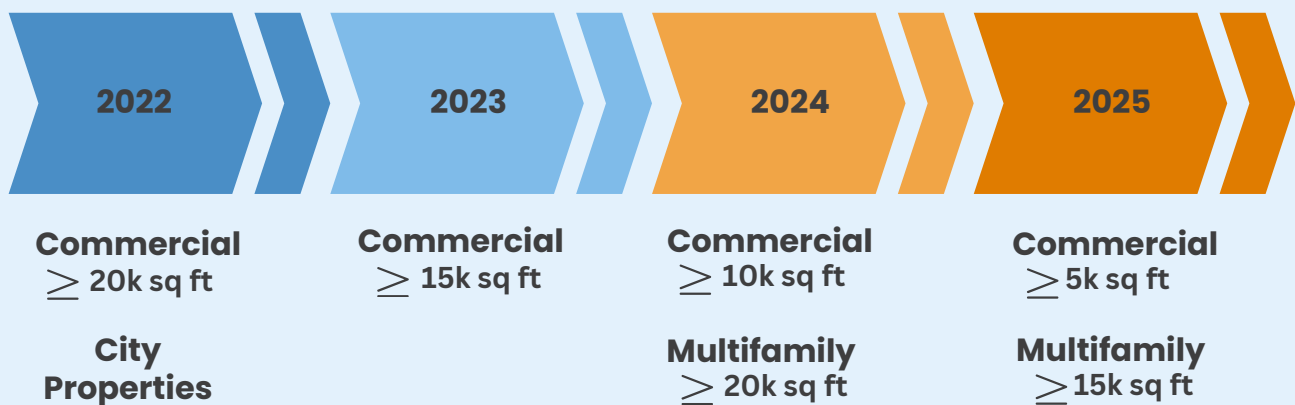


Are we seeing large emissions reductions?

No, but this is expected. Here's why:

The first four years of the program were the **Onboarding Phase**. This provided a base set of consumption data.

Phased Onboarding of Benchmarked Properties



We are now in the **Influencing Change Phase** where opportunities are identified and projects begin to be completed. Program wide reductions are beginning but limited.

In future years, more projects will be identified as building owners address long term upkeep. With these retrofits, more emissions reductions will be achieved.

What are the biggest insights this year?

Building IQ is entering the "Influencing Change" phase. In 2026, CORE expects to award over **\$400,000 in grants and rebates** to support energy efficiency and electrification projects, representing **140% more than all previous Building IQ funding combined.**

Building owners are moving from benchmarking to decarbonization planning. Six high-opportunity properties received free **High Performance Building Plans (HPBPs)** that provide customized strategies for reducing energy use, lowering emissions, and planning future upgrades.

Natural gas remains the primary source of building emissions. Despite Aspen's clean electricity supply, **84% of greenhouse gas emissions from covered buildings are associated with natural gas use**, highlighting the importance of building efficiency improvements and electrification.

Aspen achieved **100% compliance.** With CORE's free benchmarking service, **all 195 covered buildings** met Building IQ requirements, demonstrating strong community support for building efficiency programs in Aspen and establishing the gold standard for building owner assistance.

Hotels and multifamily housing represent the largest emissions reduction opportunity. Hotels account for **39% of reported building emissions**, while multifamily housing accounts for **21%**, together representing approximately **60% of total emissions** from covered buildings.

Building IQ is helping drive measurable energy savings. Commercial buildings over 20,000 square feet recorded their **second consecutive year of declining energy use intensity (EUI).** These buildings have participated in benchmarking since the program began, receiving ongoing technical support and, in many cases, funding for energy efficiency improvements.

Looking ahead, Aspen BIQ will:



Continue tracking building performance through Energy Use Intensity (EUI) and Water Use Intensity (WUI) metrics to identify trends and measure progress over time.



Expand technical assistance and funding opportunities such as High Performance Building Plans to help building owners implement energy efficiency and electrification projects.



Continue providing grants and rebates for qualifying projects through CORE. Building owners can begin the application process by contacting **benchmarking@aspencore.org**.



Engage building owners earlier in the retrofit process so efficiency and electrification opportunities can be incorporated into planned renovations and equipment replacements.



Use benchmarking data to focus support where it can have the greatest impact, particularly among hotels, multifamily housing, and other high-emitting buildings.

The second phase of the BIQ ordinance is developing building performance standards to directly address emissions from buildings.

For more information, please visit <https://aspen.gov/1245/Building-IQ>.

Technical appendix

Benchmarking categories

Covered Buildings are grouped into benchmarking categories by size and type as established under the Building IQ ordinance enacted June 1, 2022, and began reporting utility data per the schedule shown in the timeline earlier in this document.

- Property owners in the Commercial $\geq$ 20k sq ft category received their first notice of their upcoming benchmarking due date on June 1st, 2022.
- All other property owners received their first notice of their upcoming benchmarking due date on January 1st of their initial reporting year.
- Utility data reported reflects the calendar year prior to the reporting year. For example, this year's 2026 report is based on 2025 utility data.

Property Use Type

In addition to the benchmarking category, each building is classified by its Portfolio Manager-Calculated Use Type (e.g., Multifamily Housing, Restaurant, Hotel, Supermarket/Grocery Store). Use type reflects building function and determines the building's peer group for comparison to the national median.

- Portfolio Manager assigns a property type based on the owner's self reported property use that accounts for more than 50% of the property.
- For example, if a property with an office that accounts for 60% of the Gross Floor Area (GFA) and a retail store that accounts for 40%, the Portfolio Manager-Calculated Property Type will be Office.
- If no individual property type accounts for more than 50%, then the property is designated as Mixed Use.

Energy Use Intensity (EUI)

EUI represents annual energy use analyzed by building size, expressed in kBtu per square foot per year (kBtu/ft²). It is calculated by dividing total annual site energy use (kBtu) by gross floor area (square feet). Median (rather than mean) EUI was used when summarizing groups of buildings to reduce the influence of outliers and to allow comparison with national median metrics.

Total Energy Use

Total Energy Use represents the sum of annual site energy consumption (kBtu) across all buildings within a given group (use type or benchmarking category), without normalizing for building size. This measure captures the absolute scale of consumption.

Technical appendix (continued)

Energy Use by Fuel Type

Total energy use was broken down by fuel source (natural gas and electricity) based on reported consumption of each fuel, converted to a common unit (kBtu) for comparison. Monthly natural gas and electricity use were also summarized separately to identify seasonal consumption patterns.

Greenhouse Gas (GHG) Emissions

City of Aspen Electric serves 73% of BIQ covered buildings while Holy Cross Energy provides electric service for the remaining 27%. Black Hills Energy serves 100% of BIQ covered buildings that use natural gas. GHG emissions were calculated by applying the appropriate utility's emission factor to each building's energy consumption by fuel type.

- City of Aspen Electric: 0.002 metric tons CO₂e/MWh (electric)
- Holy Cross Energy: 0.126 metric tons CO₂e/MWh (electric)
- Black Hills Energy: 53.11 kg CO₂e/MMBtu (natural gas)

Emissions were also calculated separately for electricity and natural gas to illustrate the relative contribution of each fuel source to a building's or use type's total carbon footprint.

Water Use Intensity (WUI)

WUI represents annual water use normalized by building size, expressed in gallons per square foot per year. It is calculated by dividing total annual water use (gallons) by gross floor area (square feet). As with EUI, median WUI was used when summarizing groups of buildings. Buildings that do not use water were excluded from this analysis.

Compliance and Exemptions

Compliance rates reflect the share of covered buildings that met Building IQ reporting requirements for the 2025 cycle. Buildings are granted exemptions under the ordinance if they meet certain criteria (e.g., the property did not have a Certificate of Occupation or temporary Certificate of Occupation for that full year). Buildings granted exemptions under the ordinance are reported separately and are considered compliant under compliance rate calculations, as they have met all requirements for them.

Technical appendix (continued)

Number of Buildings by Use Type

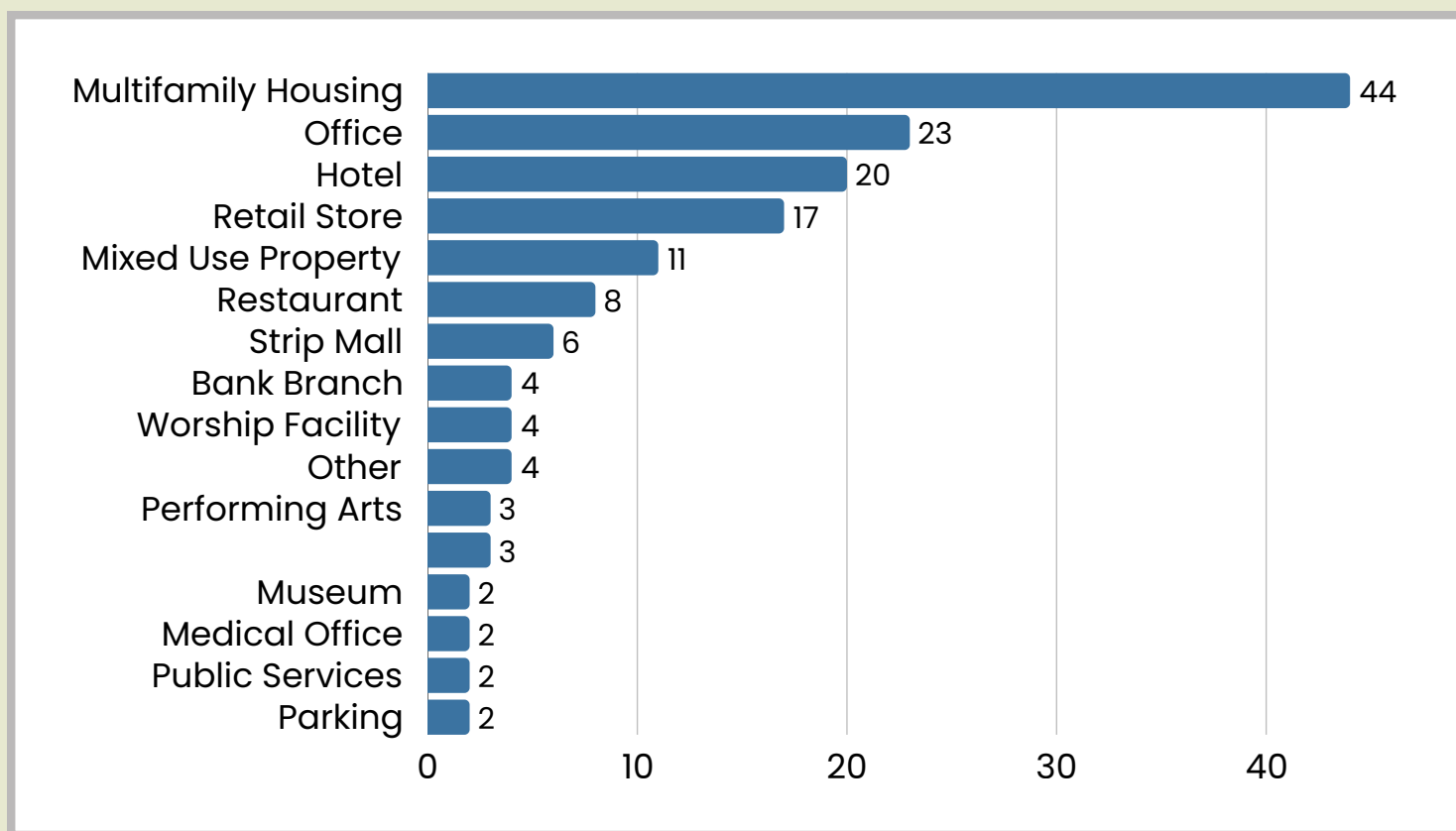
While total square footage provides the strongest indication of potential energy impact, the number of buildings by use type provides additional insight into program reach and engagement opportunities.

As shown below, multifamily housing represents the largest number of benchmarked properties with 44 buildings, followed by:

- Offices: 23 buildings
- Hotels: 20 Buildings
- Retail stores: 17 buildings

This distribution indicates that multifamily housing is both the largest use type by building count and one of the largest contributors by square footage, making it an especially important sector for future benchmarking and outreach. Note that 18 additional building use types were not included on the graph below as each had a building count of one.

of Covered Buildings by Use Type



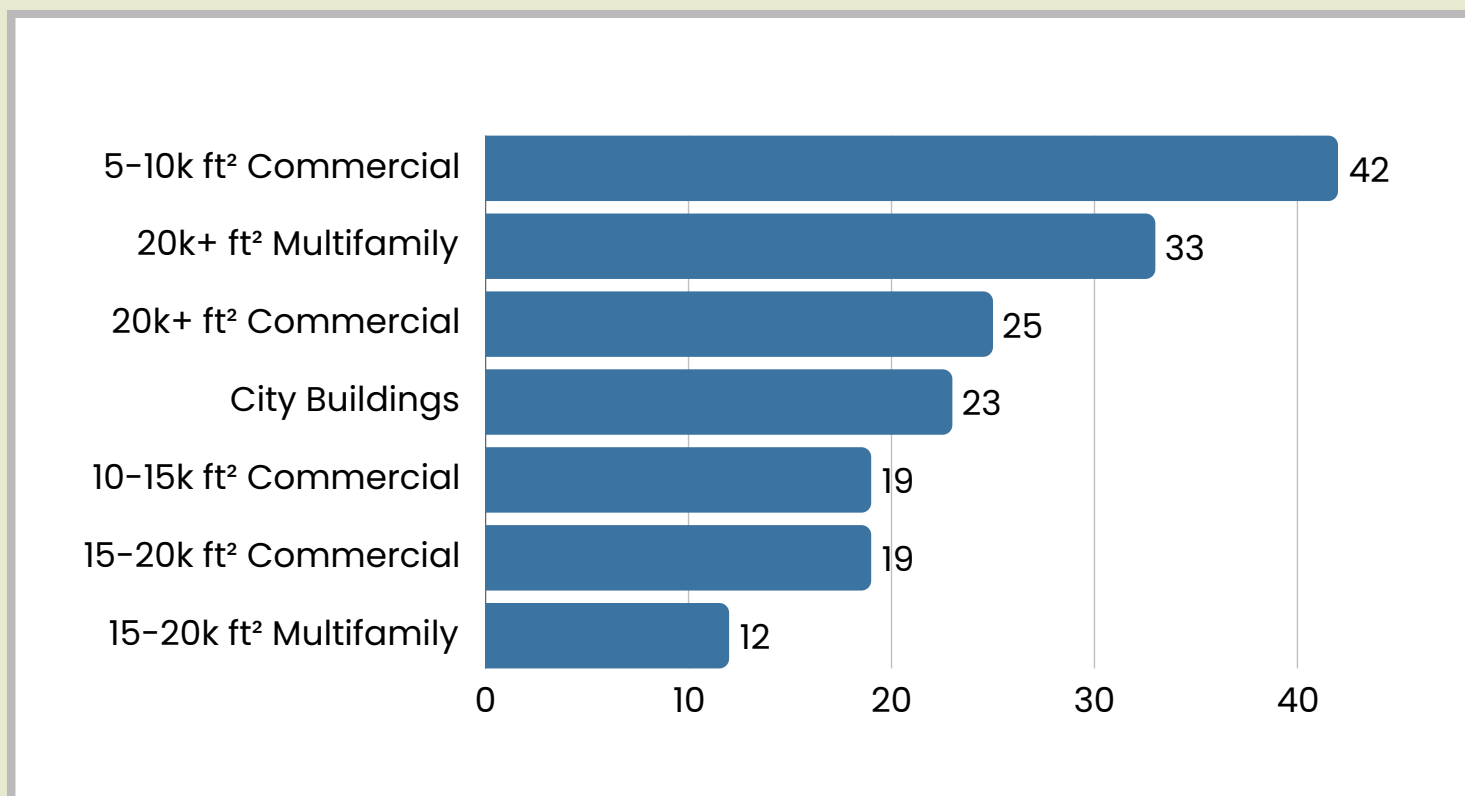
Technical appendix (continued)

Covered Buildings by Benchmarking Category

Each year, additional covered buildings have been added to the benchmarking program based on building size (square feet) and ownership type (commercial, multifamily, or city buildings). Throughout this report, abbreviated category names are used for figures and tables. The category name indicates the building size range in thousands of square feet followed by the ownership type. For example, 20k+ Multifamily refers to multifamily buildings with a gross floor area of 20,000 square feet or greater.

As shown below, the largest number of buildings falls in the 5,000–10,000 square feet commercial building category, with 42 benchmarked buildings. The next largest categories are the 20,000-square-foot-and-larger multifamily building category and the 20,000-square-foot-and-larger-commercial building category.

of Buildings by Property Category



Technical appendix (continued)

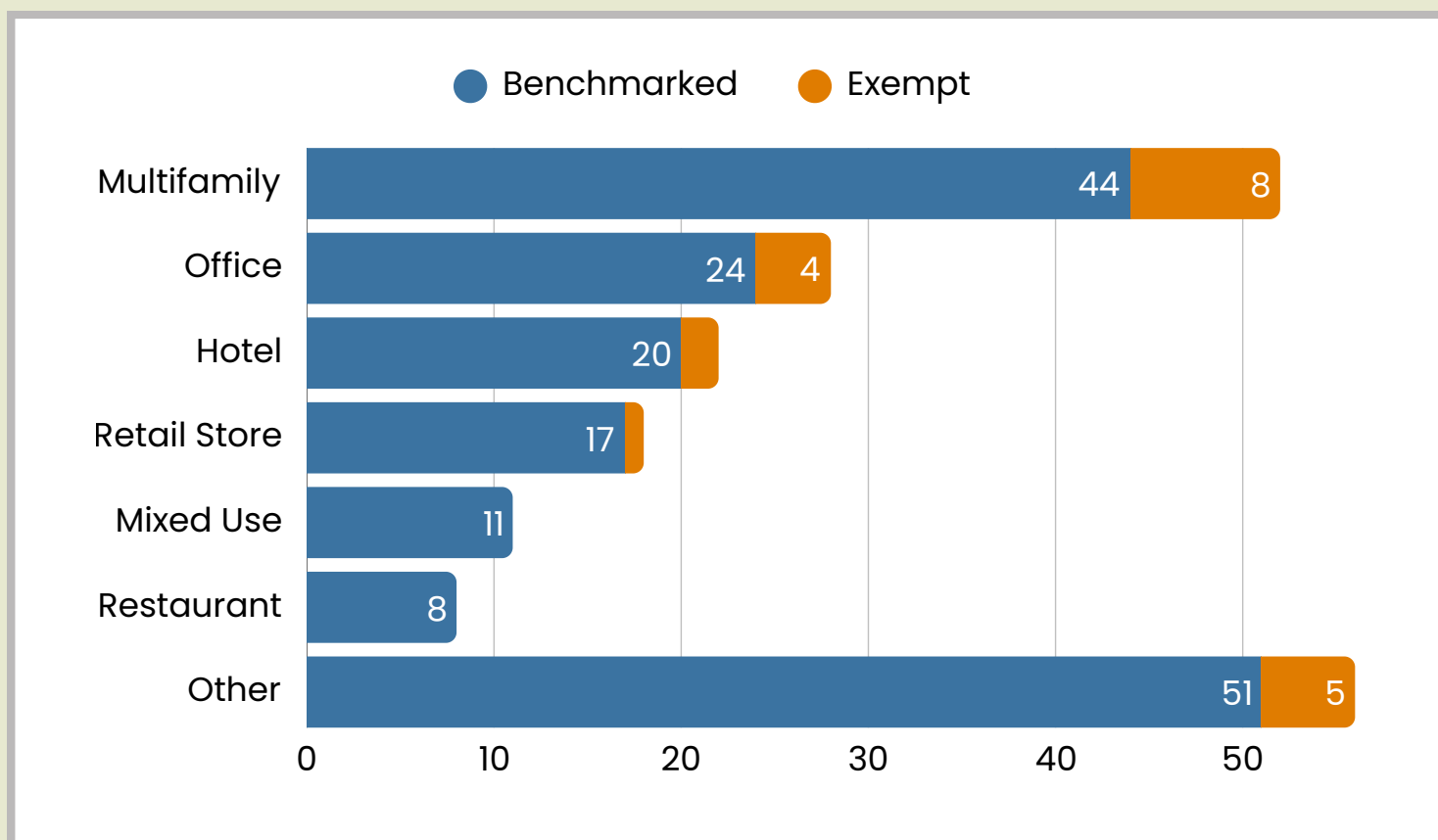
Compliance

Compliance serves as a key measure of a benchmarking program's effectiveness. A building is considered compliant when it submits a complete 12 months of verified utility data through ENERGY STAR Portfolio, and its report passes all quality checks without errors.

The BIQ program continues to demonstrate strong compliance outcomes. Of the 195 covered buildings, 175 were in compliance and 20 received exemptions. This represents an improvement from the previous reporting year, when three buildings failed to comply.

Compliance rates were consistently high across every building use type as shown below. All covered properties either successfully benchmarked or qualified for an exemption, indicating strong participation across Aspen's diverse building portfolio.

Compliance by Property Use Type



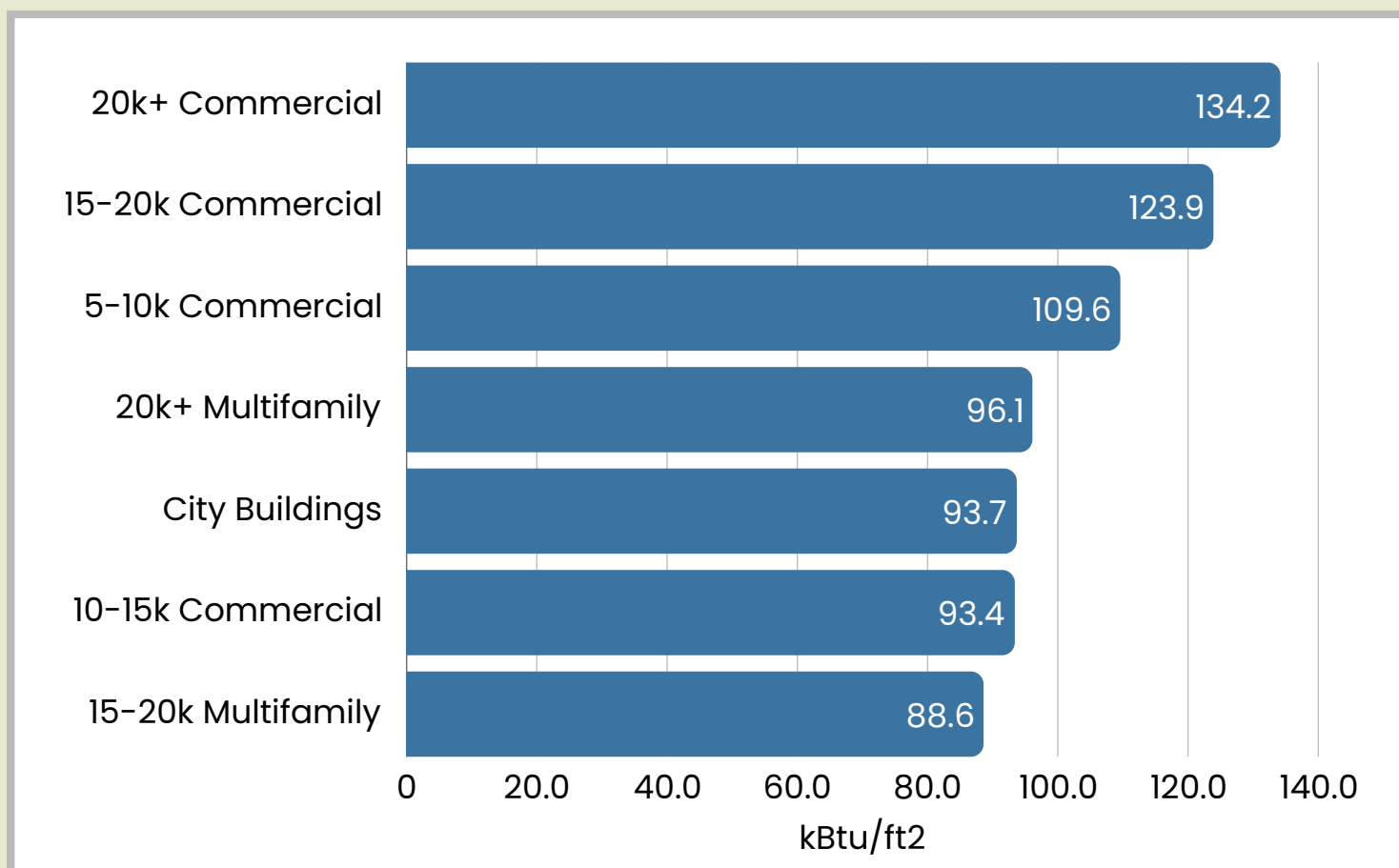
Technical appendix (continued)

Median EUI

Commercial benchmarking categories generally exhibited higher median EUIs than multifamily and city building categories. Both the 15,000–20,000 square foot and over 20,000 square foot commercial building categories reported median EUIs exceeding 123 kBtu/ft².

These results suggest that building function has a greater influence on energy intensity than the benchmarking category itself. While benchmarking categories are based primarily on building size, energy use is also strongly influenced by occupancy patterns, operating schedules, equipment, and building use.

Median EUI by Benchmarking Category



Technical appendix (continued)

Natural Gas Use

Natural gas is one of the main drivers of building-related emissions in Aspen, due to the city's low-carbon electric grid. Understanding seasonal and use-type patterns in gas consumption is therefore important to Building IQ's decarbonization goals.

Citywide natural gas use follows a clear seasonal pattern, with the highest use through the winter months. This seasonality suggests that heating, rather than baseline operations, is a significant driver of gas use in Aspen's building stock, pointing toward building envelope improvements and heating electrification as key levers for emissions reduction.

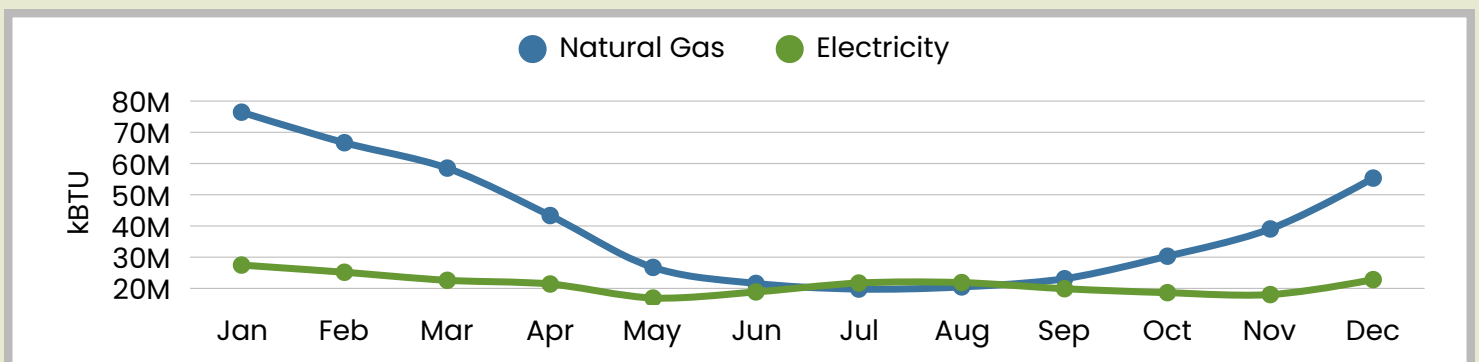
Hotels, multifamily housing, hospitals, fitness centers, and other lodging/residential properties account for the largest share of natural gas use citywide, with all five following the same winter-peaking pattern seen at the aggregate level. These use types share common drivers: continuous occupancy and/or hot water and space-heating demands. These use types could benefit from targeted retrofit or fuel-switching incentives.

Electricity Use

Electricity use shows a different seasonal pattern than natural gas, peaking in both summer and winter months, with lower use in the fall and spring seasons. This dual-peak pattern is consistent with cooling loads in summer and heating loads during the winter, as well as peak travel times for visitors.

Hotels, multifamily housing, hospitals, fitness centers, and mixed-use properties are the largest electricity consumers, mirroring several of the same use types seen in the natural gas analysis. These properties show the same summer/winter double-peak pattern as the citywide total. The overlap between the top gas users and top electricity users among these use types shows that lodging, residential, and fitness facilities largely drive total citywide energy demand across both fuels, reinforcing them as priority categories for Building IQ engagement.

2025 Energy Use for All Benchmarked Buildings

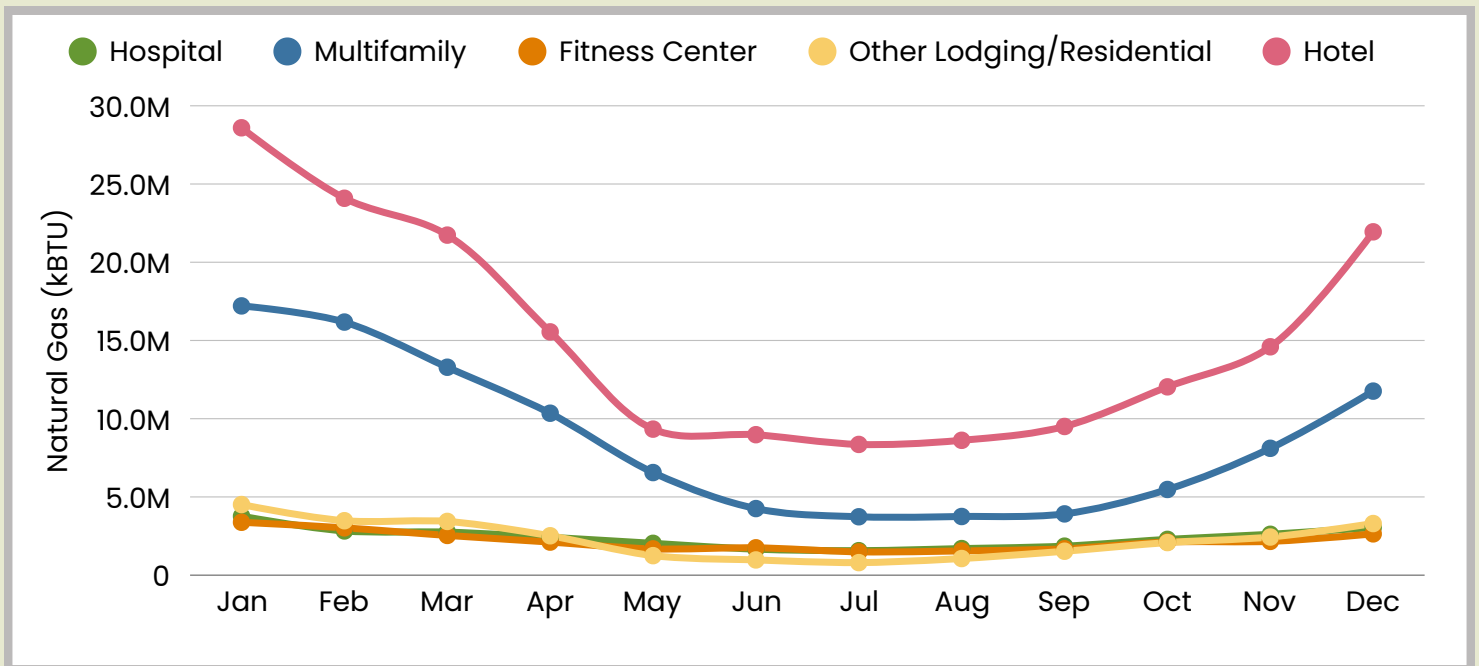


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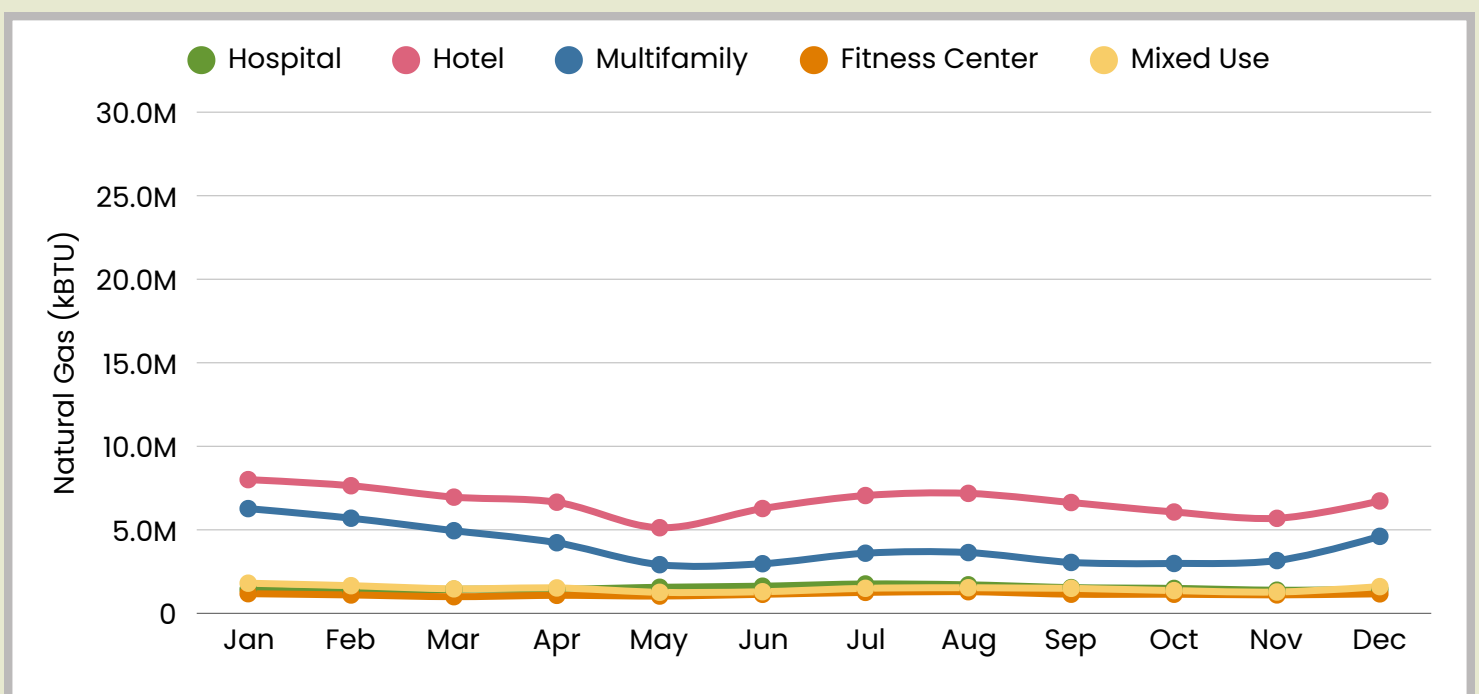
Comparing Fuel Usage Through Equivalent Units

Converting electricity usage (kWh) and gas usage (therms) to equivalent units (kBtu) results in a clearer comparison of energy use by fuel type.

2025 Natural Gas Use for Top 5 Benchmarked Buildings



2025 Electricity Use for Top 5 Benchmarked Buildings



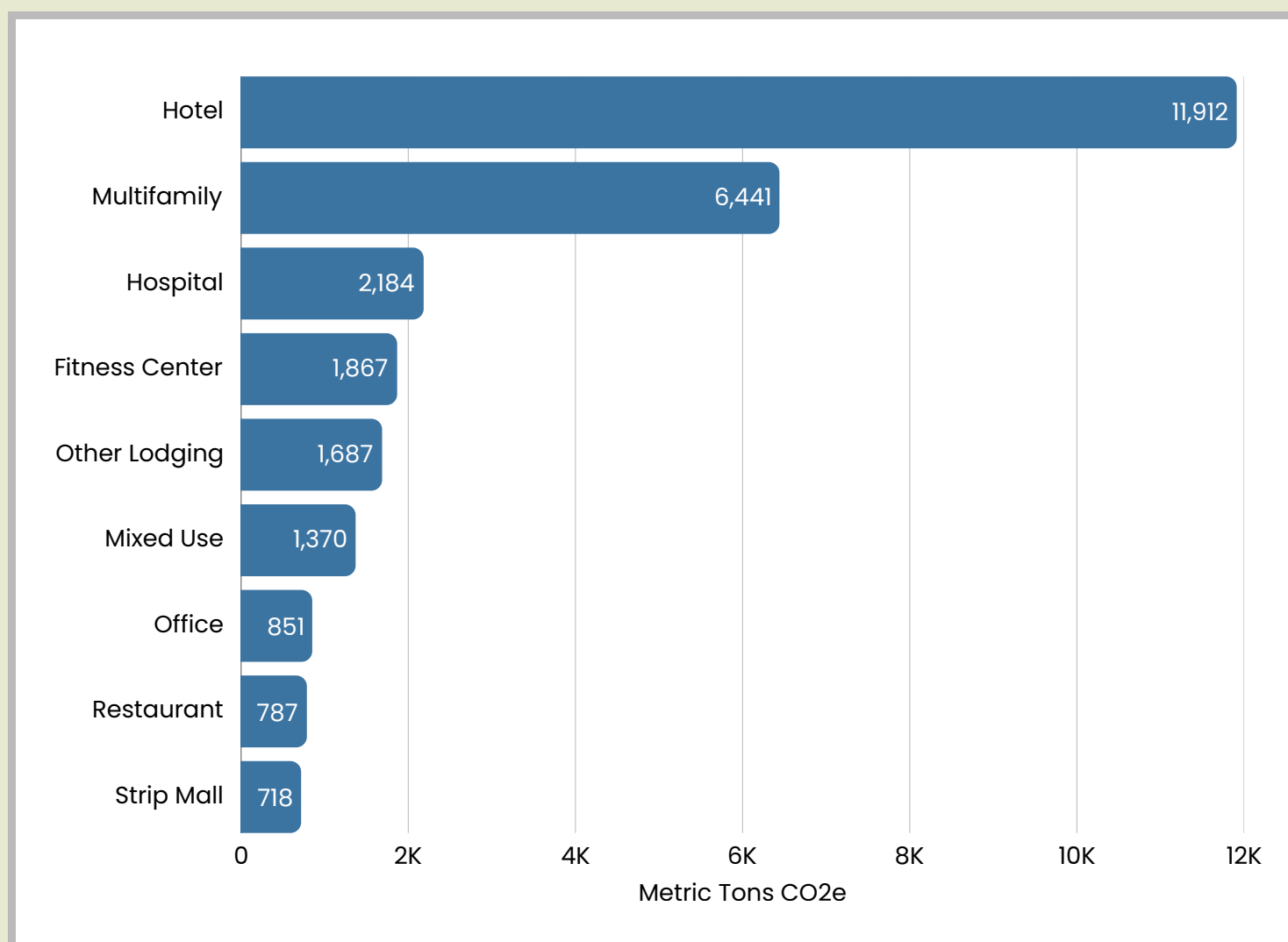
Technical appendix (continued)

GHG Emissions by Use Type

A small number of building types accounted for the large majority of total emissions from benchmarked buildings once again demonstrating that the area of focus for greatest GHG reductions is hotels and multifamily housing.

On a percentage basis, hotels alone account for 39.2% of total emissions from benchmarked buildings, with multifamily housing contributing an additional 21.2%. Overall, the top eight use types shown below account for over 91% of all GHG emissions from benchmarked buildings citywide.

Total Annual GHG Emissions for Top Use Types



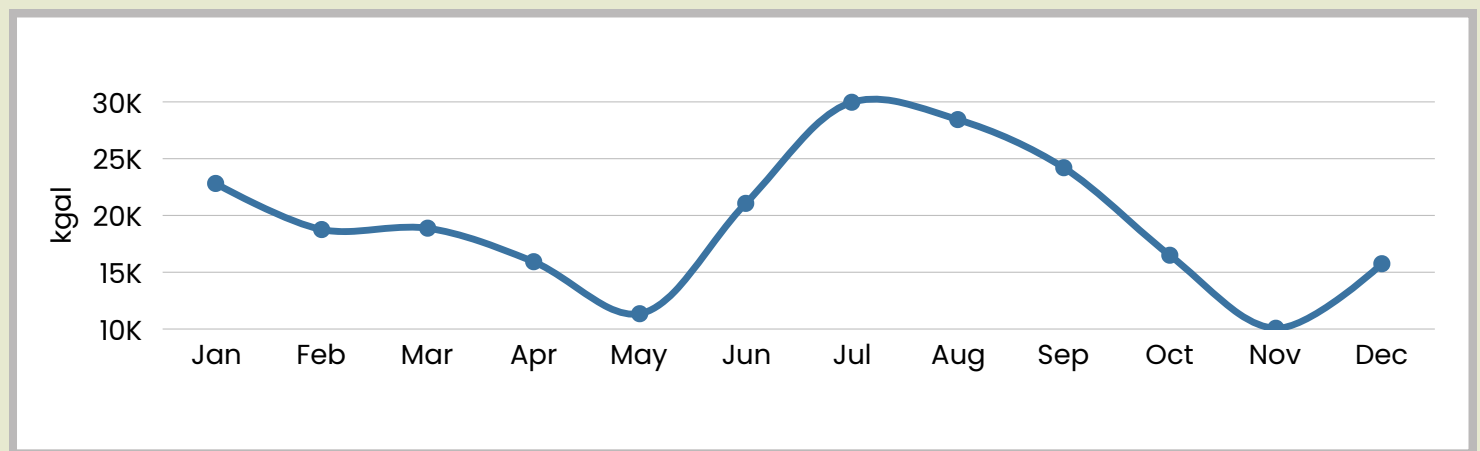
Technical appendix (continued)

Water Use

Water use is not a direct component of Aspen’s greenhouse gas targets, but it is closely tied to Aspen’s broader sustainability and climate resilience goals, especially given the City’s recurring drought conditions. Aspen’s water utility has implemented staged water shortage restrictions in recent years, including mandatory seasonal irrigation schedules, limited outdoor water use, restricted filling of water features, and other measures to conserve water community-wide. Reporting water use alongside energy use gives building owners and the City a fuller picture of resource intensity and supports conservation planning.

Total water use across benchmarked buildings in 2025 was 233,734 kgals. Water use peaks between June and September, consistent with irrigation, landscaping, and water demand during Aspen’s warmer months. This seasonal peak overlaps directly with the period in which the City’s mandatory water restrictions are most actively enforced, suggesting that benchmarked buildings are meaningful contributors to the seasonal demand that these restrictions are designed to manage.

Total Water Use for All Benchmarked Buildings

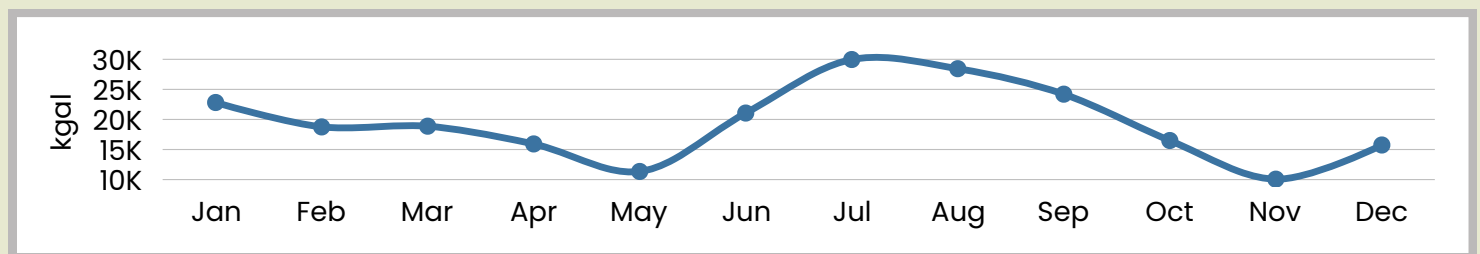


Technical appendix (continued)

Water Use

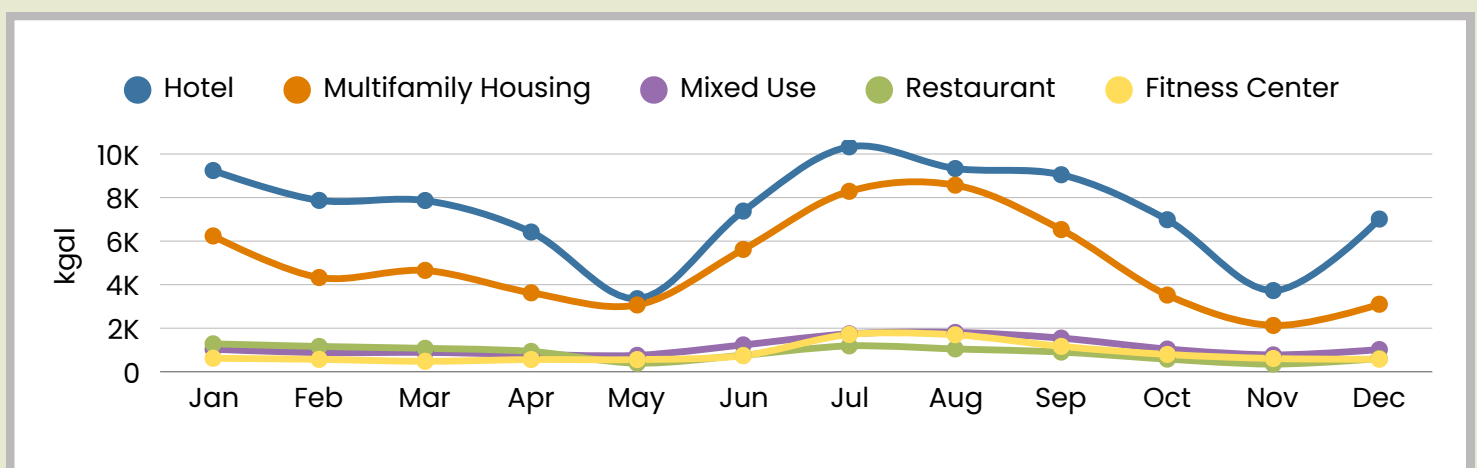
Water use is not a direct component of Aspen's greenhouse gas targets but it is closely tied to Aspen's broader sustainability and climate resilience goals. Reporting water use alongside energy use gives building owners and the City a fuller picture of resource intensity and supports conservation planning. Total water use across benchmarked buildings in 2025 was 233,734 kgals. Water use peaks during Aspen's warmer months, overlapping with the period in which the City's mandatory water restrictions are most actively enforced, suggesting that benchmarked buildings are meaningful contributors to the seasonal demand that these restrictions are designed to manage.

Total Water Use for All Benchmarked Buildings



Hotels and multifamily housing represent the largest contributors to total benchmarked water use, accounting for approximately 37.9% and 25.5% of the water consumption, respectively. Combined, these two property types account for about 63.4% of total benchmarked water use, indicating that water reduction strategies targeted toward these sectors could have significant impact on overall water consumption.

Water Use of Top 5 Use Types



Technical appendix (continued)

Data source and reporting period

Building-level energy, water, and building characteristics were reported by covered building owners/managers through ENERGY STAR Portfolio Manager (ESPM) as required under the Building IQ ordinance. All data reflects the 2025 calendar year unless otherwise noted. In some instances, buildings with incomplete or missing data for a given metric were excluded from the relevant analysis (e.g., buildings without natural gas data or without water usage).

CORE uses ClearlyEnergy's Building Energy Analysis Manager (BEAM) to manage Building IQ data and support program administration throughout the annual reporting cycle. Developed with support from the U.S. Department of Energy, BEAM serves as the central repository for building, building owner, utility, compliance, and program data. Building and utility information reported on ENERGY STAR Portfolio Manager by is pulled into BEAM, where CORE reviews and manages data for all covered properties. Complementary to the platform's data management capabilities, BEAM also includes a customer relationship management (CRM) that supports communication with building owners and sharing of program guidance and resources.

Once data is ingested into BEAM, CORE leverages configurable data quality flags to identify incomplete, missing, or potentially inconsistent information that may require additional review or follow-up. Other features in BEAM such as derived columns, are used to standardize Building IQ calculations, including building-level energy use intensity (EUI) and greenhouse gas (GHG) emissions, and support analysis of performance and year-over-year trends. Additionally, advanced data filtering and organizational tools such as Labels, Building Categories, and Column List Profiles allow CORE to group properties and create customized data views based on selected building characteristics, reporting statuses, and metrics. These tools help staff to quickly isolate relevant subsets of the building stock and conduct targeted analysis throughout the reporting cycle.

Following data review and finalization, CORE uses BEAM to generate annual Building IQ scorecards for individual properties. These scorecards translate each building's benchmarking results into accessible reports, summarizing energy and emissions performance, year-over-year trends, relevant resources, and personalized recommendations based on the building's reported data and characteristics. Scorecards are then shared with building owners to help them better understand their building's performance and identify opportunities to improve energy efficiency, reduce emissions, and lower energy costs. This allows for a deeper conversation between building owners and CORE's energy advisors on technical and funding opportunities for their property.

Sources

1. Group 14 Analysis, 2022
2. Energy Star Portfolio Manager, 2025
3. ESPM Glossary: <https://portfoliomanager.energystar.gov/pm/glossary>
4. 2023 GHG inventory: <https://aspen.gov/DocumentCenter/View/14917/2023-Aspen-Community-Wide-Greenhouse-Gas-Inventory-Summary-PDF>
5. 2026 compliance rates in Colorado: <https://touchstoneiq.com/maps>

Notes

1. Monthly water data was manually downloaded from ESPM.
2. Greenhouse gas emissions were recalculated in BEAM using the following emissions factors:
 - a. 53.11 kg CO₂e/MMBtu for natural gas for Black Hills Energy.
 - b. 0.126 metric tons CO₂e/MWh for electricity for Holy Cross Energy.
 - c. 0.002 metric tons CO₂e/MWh for electricity provided by City of Aspen Electric.



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powered by **CORE**



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