

2022

Green Lodging Trends

U.S. Market Report



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ABOUT THE REPORT

The inaugural Green Lodging Trends, U.S. Market report benchmarks the prevalence of sustainability best practices of hotels in the United States.

It is based on United States-specific data, gathered for the 2022 edition of the Green Lodging Trends Report (GLTR). GLTR was launched in 2016 and is the leading global benchmarking study on sustainability best practices in hotels.

GLTR seeks to assess and catalyze sustainability innovation and best practices while promoting awareness of the state of sustainability across hotels worldwide. As a subset of GLTR, AHLA endeavors to achieve the same within the United States.

GLTR was published annually from 2016 to 2018 before shifting to a biennial exercise after 2018. Given the massive disruption to the hospitality industry caused by the Covid Pandemic, GLTR returned this year with its highest participation rate to date and a U.S.-specific report produced in partnership with AHLA. These new developments since 2018 demonstrate how sustainability has gained traction in the lodging industry. Both GLTR and AHLA reports will continue to keep a pulse on the adoption of best practices as innovative practices become commonplace, making way for even more innovative practices in the future.

More than 17,000 hotels contributed to this year's AHLA report. There were two data collection methods; direct participation by responding to the GLTR survey on The Greenview Portal, an internationally recognized

hotel sustainability management system, and bulk data set received from companies.

Participating hotels will receive a confidential, bespoke benchmarking report which compares their performance against peers of similar hotel profile. They may also be featured in the reports for outstanding sustainability best practices.

The 75 best practices assessed in 2022 reports were grouped into 9 thematic chapters, including single-use plastic, climate action, community, and so on. Each chapter summarizes findings with deeper analytics while providing charts unique to each best practice. Data and charts were also segmented by hotel profiles (geographic location, service type, STR chain scale, and hotel type), which provided both macro and more granular analysis of uptake rates.

Finally, based on their adoption rates, all best practices were grouped into four categories below:

- Common practices **(75% and above)**
- Established practices **(50% - 74%)**
- Emerging practices **(25% - 49%)**
- Innovative practices **(Less than 25%)**

To note, 2022's reports did not include guidance on definitions of key terms, for example "local", which may vary by region.

EXECUTIVE SUMMARY



This first of its kind benchmark survey details how America's hotels are performing on a host of sustainability metrics. From water conservation and waste reduction to energy efficiency and responsible sourcing, the data in this report highlights the sustainability progress hotels have made and the opportunities that lie ahead.

Highlights of the report include:



RESPONSIBLE SOURCING

Over 99% of U.S. hotels take action to source at least one type of product sustainably, making a positive environmental and social impact through their purchasing power. Over 46.5% of hotels purchase at least half their food and beverage items from fair trade sources. 17.1% hotels purchase at least half of their food and beverages from local providers in an effort to minimize supply-chain emissions.



WATER CONSERVATION

Virtually all U.S. hotels have implemented water conservation measures in the past three years, including linen reuse programs, low-flow and high-efficiency fixtures, and smart landscaping. Linen and towel reuse programs are implemented by over 95% of hotels to reduce the amount of laundry and enhance water and energy efficiency. Over 80% of hotels use native or drought-tolerant plants for landscaping to reduce irrigation needs. Water-smart landscaping, irrigation systems, leak detection, and efficient pool maintenance all help ensure hotels use less water.



ENERGY EFFICIENCY

Over 80% of all U.S. hotels plan and implement energy reduction initiatives to optimize energy efficiency and significantly reduce carbon footprints. Nearly 99% of hotels have implemented energy efficiency measures in the past three years, and over 90% of all hotels benchmark their energy performance against peers. Almost half of all hotels are opting for LED lighting, which uses 75% less energy and lasts 25 times longer. Nearly 30% of all hotels maintain electric vehicle charging stations on their property, with more on the way.



WASTE REDUCTION

America's hotels have worked to reduce both single-use plastics and food waste from their operations, while maintaining standards of quality, cleanliness, and amenities guests expect. Over 82% of hotels implemented food waste prevention strategies in the last year, including community food donation programs and efforts to divert waste from landfills. Nearly 50% of hotels are opting for bulk toiletry dispensers over plastic bottles, and a growing number of hotels have eliminated plastic straws and stirrers.

WASTE MANAGEMENT



→ **Under waste management, twelve practices were being assessed.** The practices are spread across four categories, with four each under common practices and innovative practices and two each under established and emerging practices. Nearly all hotels have implemented waste management measures in the past three years, diverted food waste from the landfill, and donated leftover bathroom amenities. Another common practice is the implementation of food waste strategies. Around six in ten hotels plan and implement waste reduction initiatives, as well as measure the amount of food waste generated. Placing recycling bins in common areas and conducting waste audits are emerging practices. There are four practices that are still in the beginning stages of implementation, which include placing recycling bins in guestrooms, donating excess food, tracking amount of waste generated, and working with vendors for take-back recycling programs.

→ KEY FINDINGS

• Common practices

- Virtually all hotels (99.2%) have implemented waste management measures in the past three years.
- More than nine in ten hotels (92.5%) take actions to divert food waste from the landfill.
- 91.7% of all hotels donate leftover bathroom amenities such as soap bars, shampoo, and shower gel.
- 82.0% of all hotels implemented food waste prevention strategies in the last year.

• Established practices

- 62.5% of all hotels plan and implement waste reduction initiatives.
- 60.2% of all hotels measure the amount of food waste they generate.

• Emerging practices

- 41.1% of all hotels place recycling bins in all common areas.
- A third of all hotels have conducted a waste audit within the past three years.

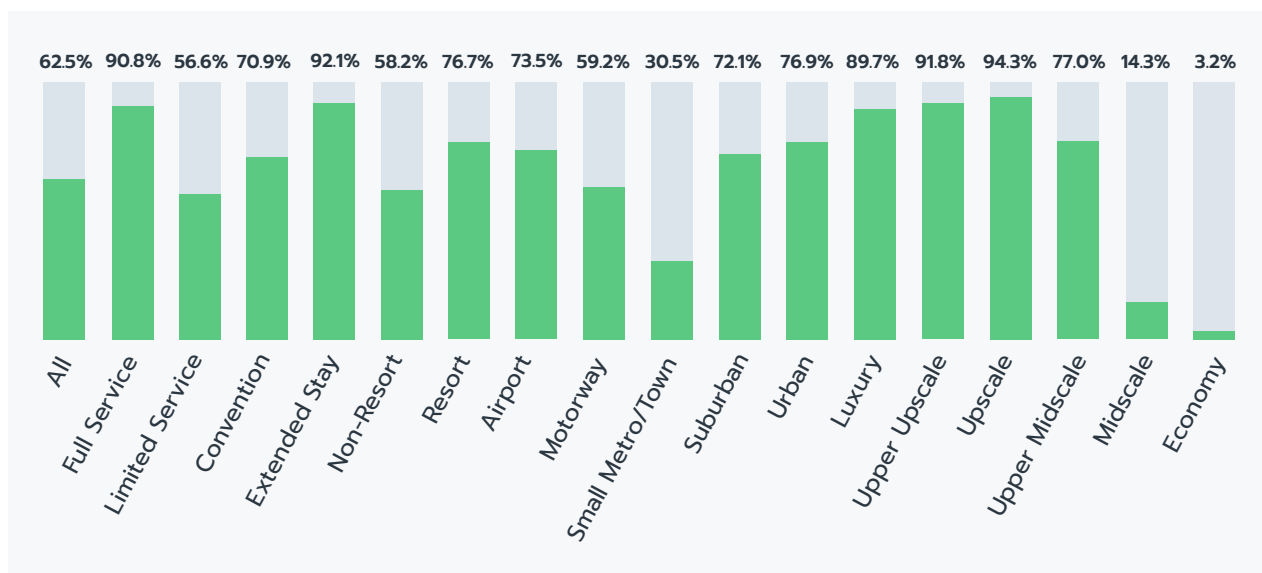
• Innovative practices

- 23.2% of all hotels place recycling bins in guestrooms.
- Close to one-fifth of all hotels donate their excess food to community kitchens and programs.
- 16.2% of all hotels track the amount of waste and recyclables they generate.
- Almost one in ten hotels have agreements with vendors for take-back recycling programs.

→ WASTE REDUCTION PLAN

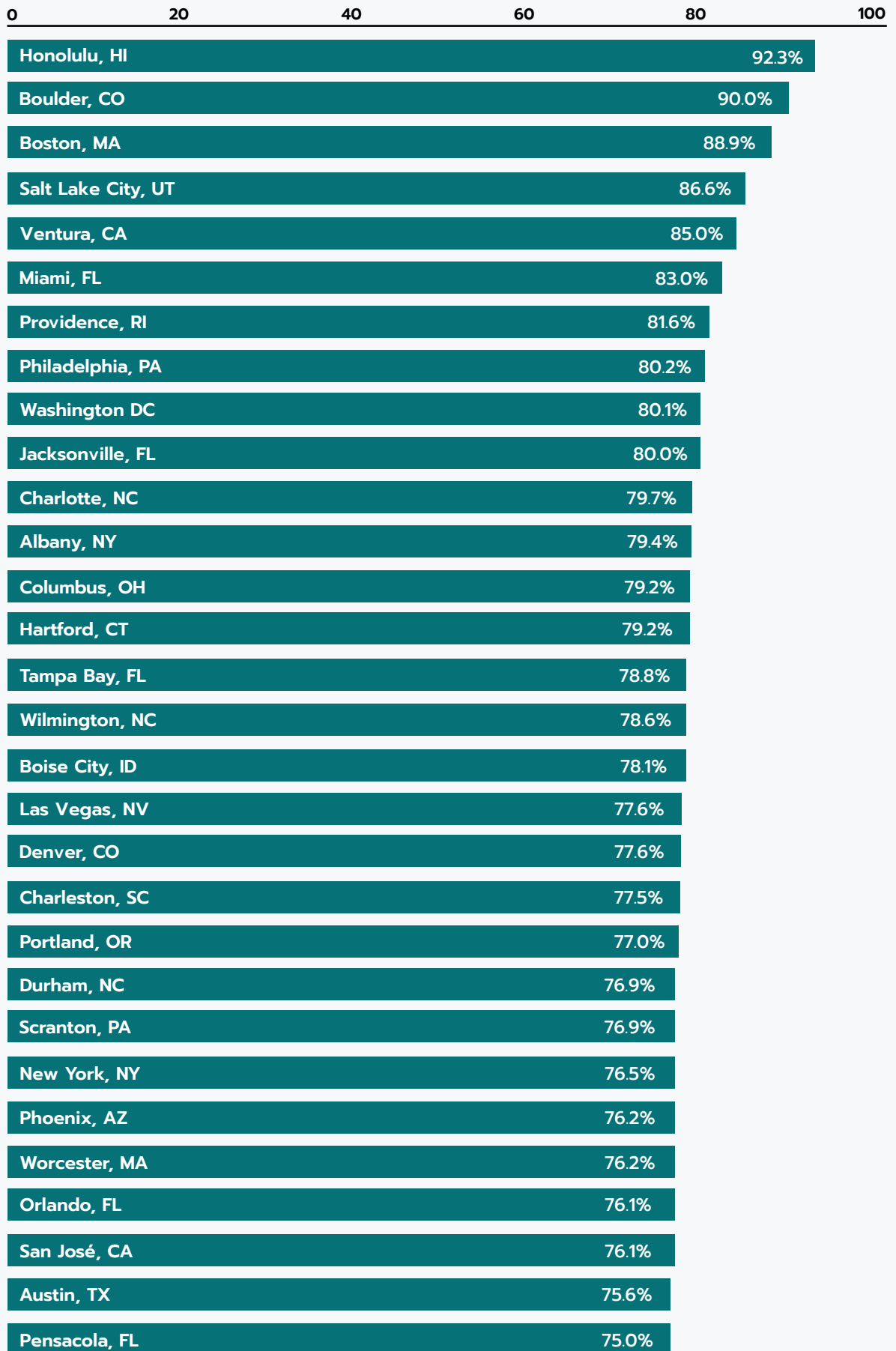
Hotels planning and implementing initiatives to reduce waste is an established practice.

- 62.5% of all hotels plan and implement waste reduction initiatives.
- Full service hotels (90.8%) have a significantly higher uptake rate of this practice compared to limited service hotels (56.6%).
- Extended stay hotels are the most likely (92.1%) to plan and implement waste reduction initiatives, while non-resorts are the least likely (58.2%).
- The prevalence rate for this practice is largely similar for all location types at 59.2% to 76.9%, except for small metro/town hotels which only have a prevalence rate of 30.5%.
- This is a common practice across the STR chain scale segments, except for midscale (14.3%) and economy (3.2%) hotels where it is an innovative practice.
- The top three metropolitan areas that implemented this practice are Honolulu, HI (92.3%), Boulder, CO (90.0%), and Boston, MA (88.9%).



Established practice

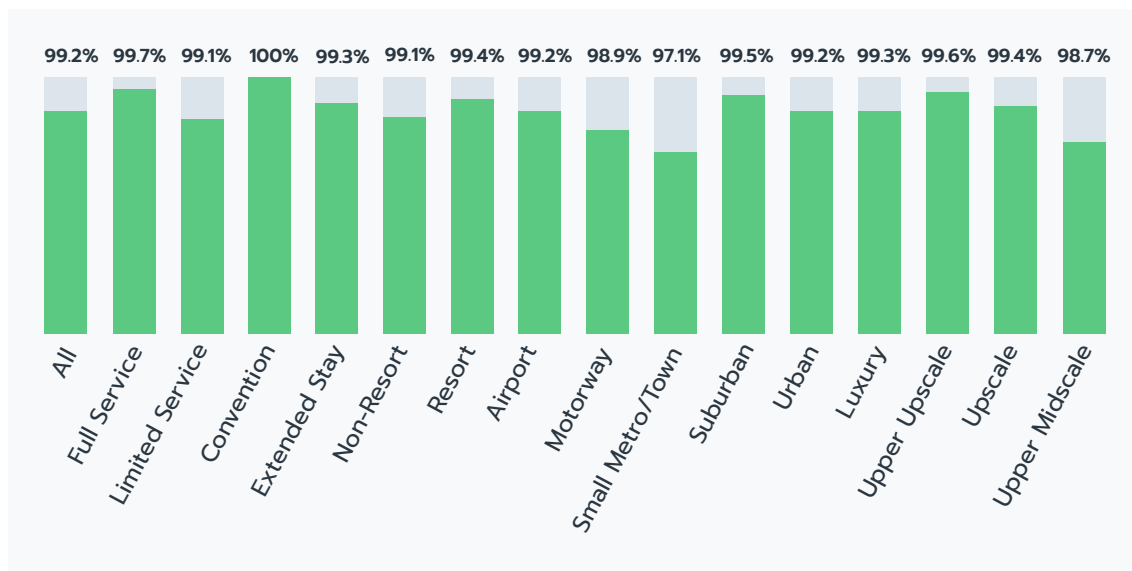
Top 30 Metropolitan Areas



→ WASTE MANAGEMENT MEASURES

Hotels implementing waste management measures is a common practice.

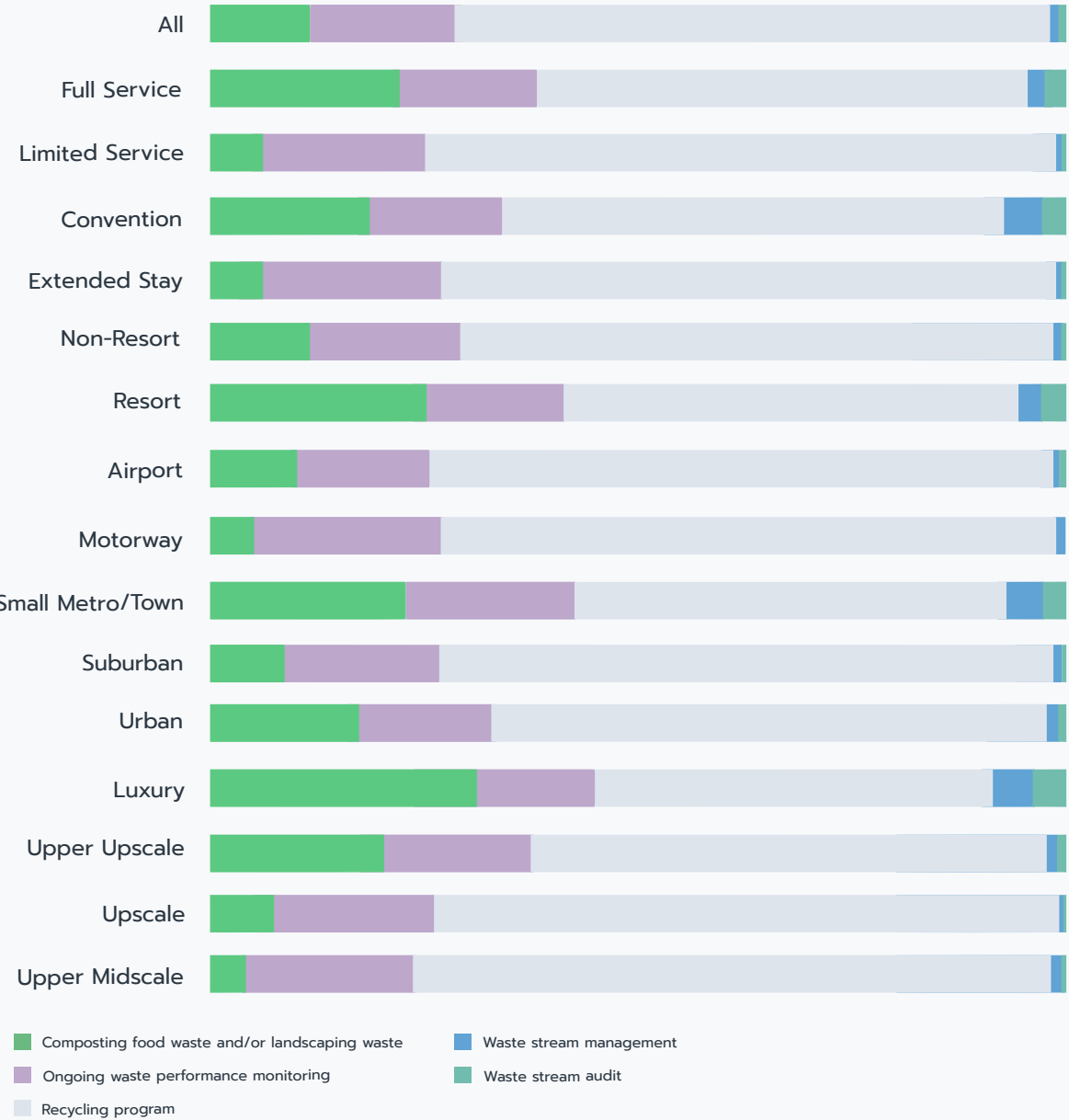
- Virtually all hotels (99.2%) have implemented waste management measures in the past three years.
- The prevalence rate of this practice is largely similar across hotels at 97.1% and above, regardless of service, property, and location types, as well as STR chain scale segment.
- The top three waste management measures are having a recycling program (69.9%), monitoring waste performance (18.2%), and composting food and/or landscaping waste (11.2%).



**Midscale and Economy categories are excluded from the chart as data is insufficient.*

Common practice

Types of Waste Management Measures

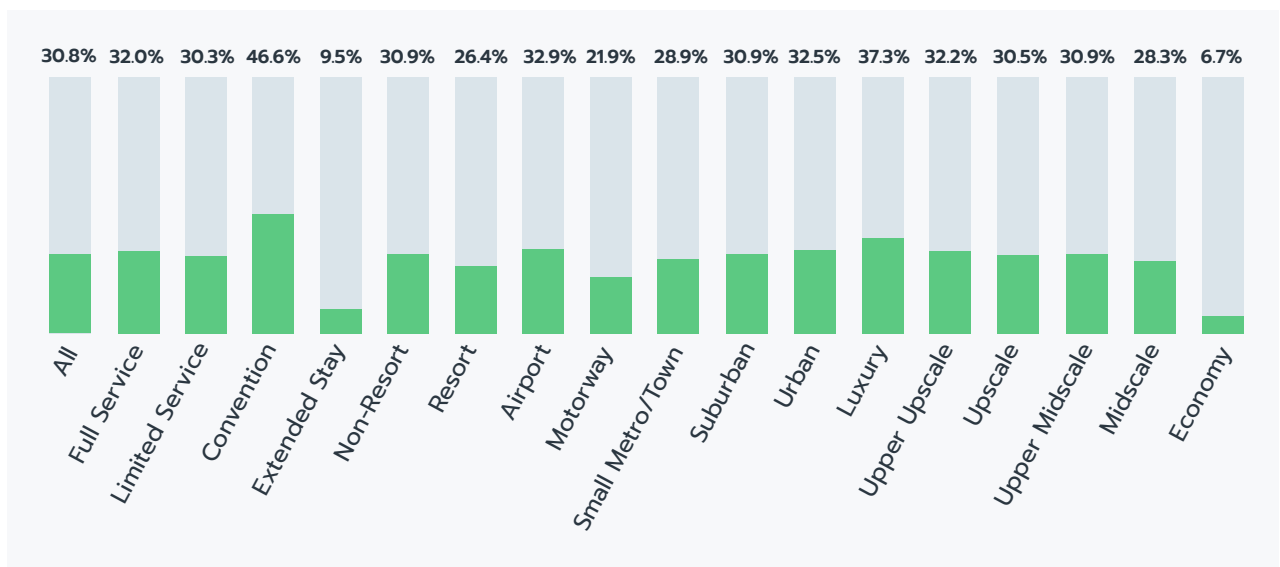


*Midscale and Economy categories are excluded from the chart as data is insufficient.

→ WASTE AUDIT

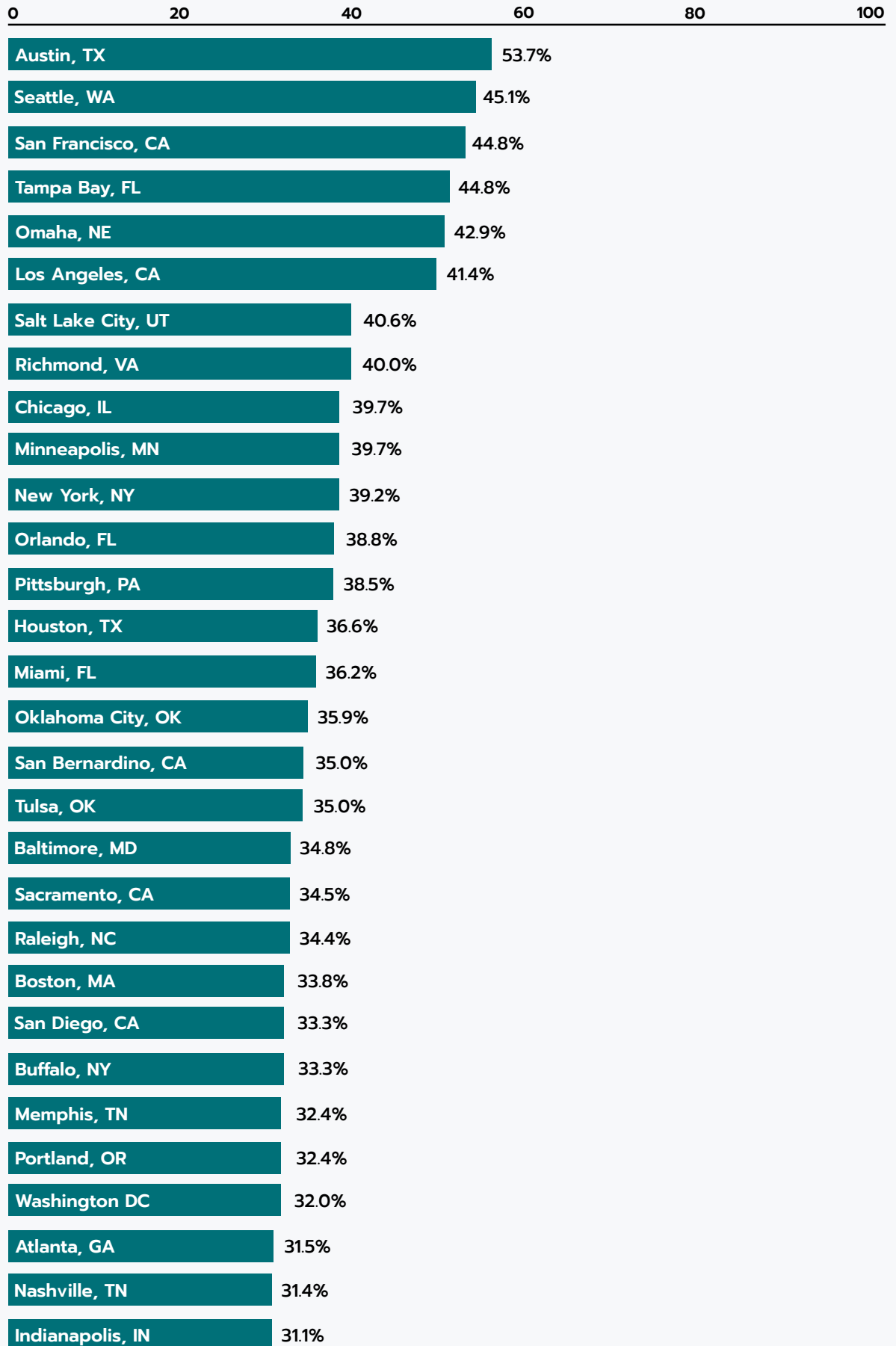
Hotels conducting waste audits within the past three years is an emerging practice.

- Around three in ten hotels have conducted a waste audit within the past three years.
- The prevalence rate of this practice is slightly higher in full service hotels (32.0%) compared to limited service hotels (30.3%).
- This is an emerging practice for most property types with uptake rates between 26.4% and 46.6%, except extended stay hotels where it is an innovative practice (9.5%).
- Prevalence rates for this practice are similar across location types, ranging from 21.9% to 32.9%.
- Across the STR chain scale segments, this is an emerging practice with prevalence rates near the overall average, except economy hotels (6.7%) where it is an innovative practice.
- The top three metropolitan areas that conducted waste audits are Austin, TX (53.7%), Seattle, WA (45.1%), and San Francisco, CA (44.8%).



Emerging practice

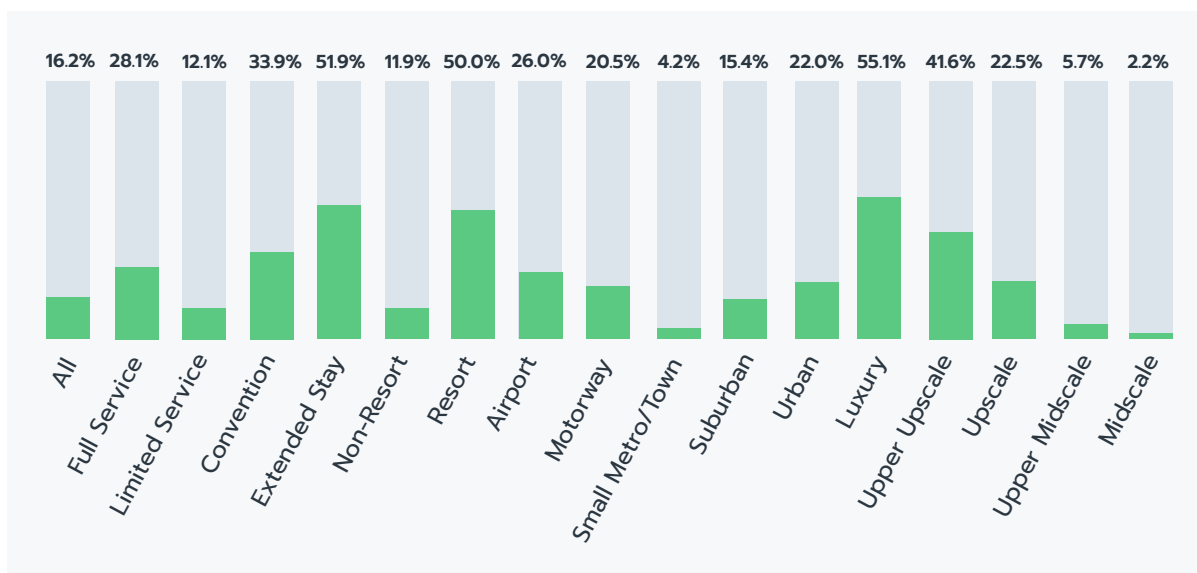
Top 30 Metropolitan Areas



→ WASTE TRACKING

Hotels tracking the amount of waste and recyclables leaving their premises, including waste diversion rate (amount of waste diverted from landfill), is an innovative practice.

- 16.2% of all hotels track the amount of waste and recyclables they generate.
- Uptake rate of this practice is more than twice in full service hotels (28.1%) compared to limited service hotels (12.1%).
- Among the property types, uptake rate for this practice is the highest in extended stay hotels (51.9%), followed closely by resort hotels (50.0%).
- This is an innovative practice in most location types, except airport hotels (26.0%), where it is an emerging practice.
- There is an increasing trend in prevalence rates across midscale (2.2%) to luxury (55.1%) segments.



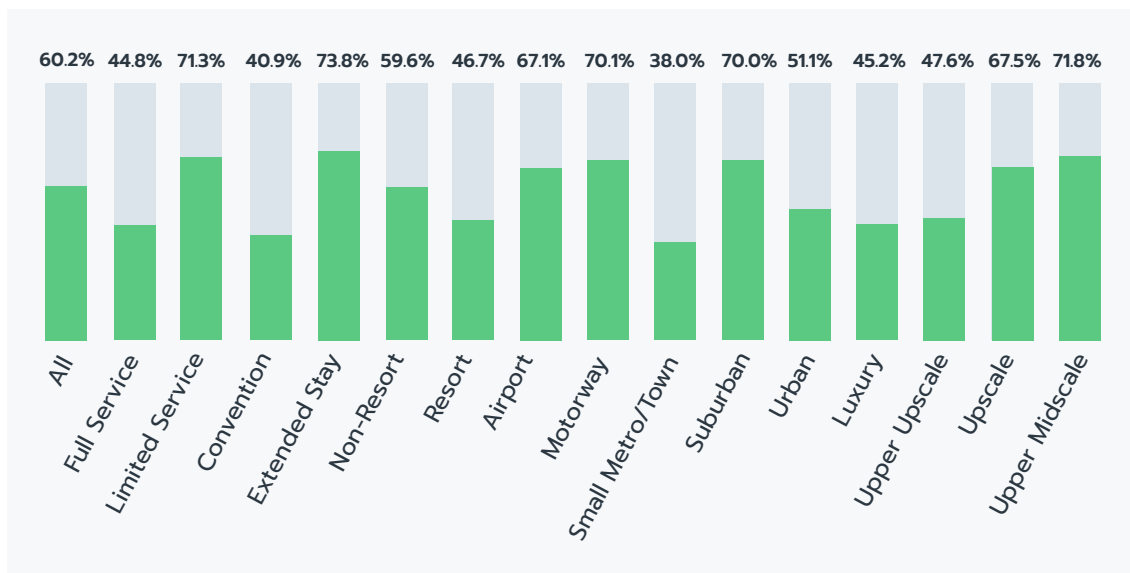
**Economy category is excluded from the chart as data is insufficient.*

Innovative practice

→ FOOD WASTE TRACKING

Hotels measuring the amount of food waste generated is an established practice.

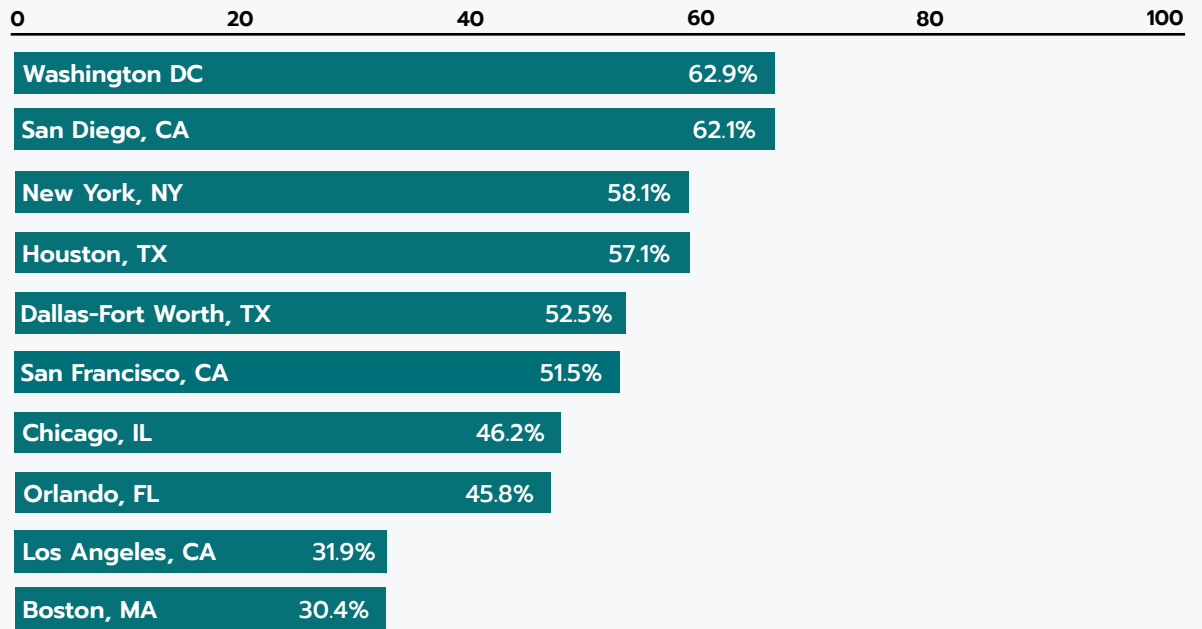
- 60.2% of all hotels measure the amount of food waste they generate.
- Limited service hotels are more likely (71.3%) to measure their food waste compared to full service hotels (44.8%).
- Among all property types, prevalence of this practice is the highest in extended stay hotels (73.8%), while it is the lowest in convention hotels (40.9%).
- This is an established practice in most location types with prevalence rates between 51.1% and 70.1%, except for small metro/town hotels (38.0%), where it is an emerging practice.
- Prevalence of this practice decreases steadily from upper midscale (71.8%) to luxury (45.2%) segments.
- Top three metropolitan areas that track food waste are Washington, DC (62.9%), San Diego, CA (62.1%), and New York, NY (58.1%).



*Midscale and Economy categories are excluded from the chart as data is insufficient.

Established practice

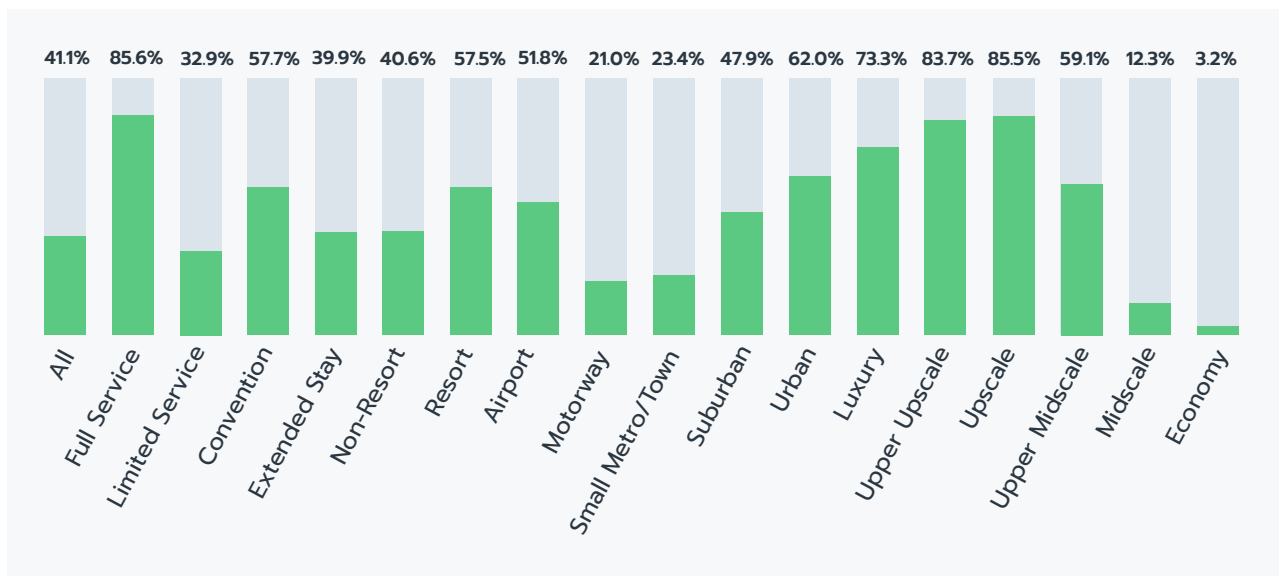
Top 10 Metropolitan Areas



→ RECYCLING BINS IN COMMON AREAS

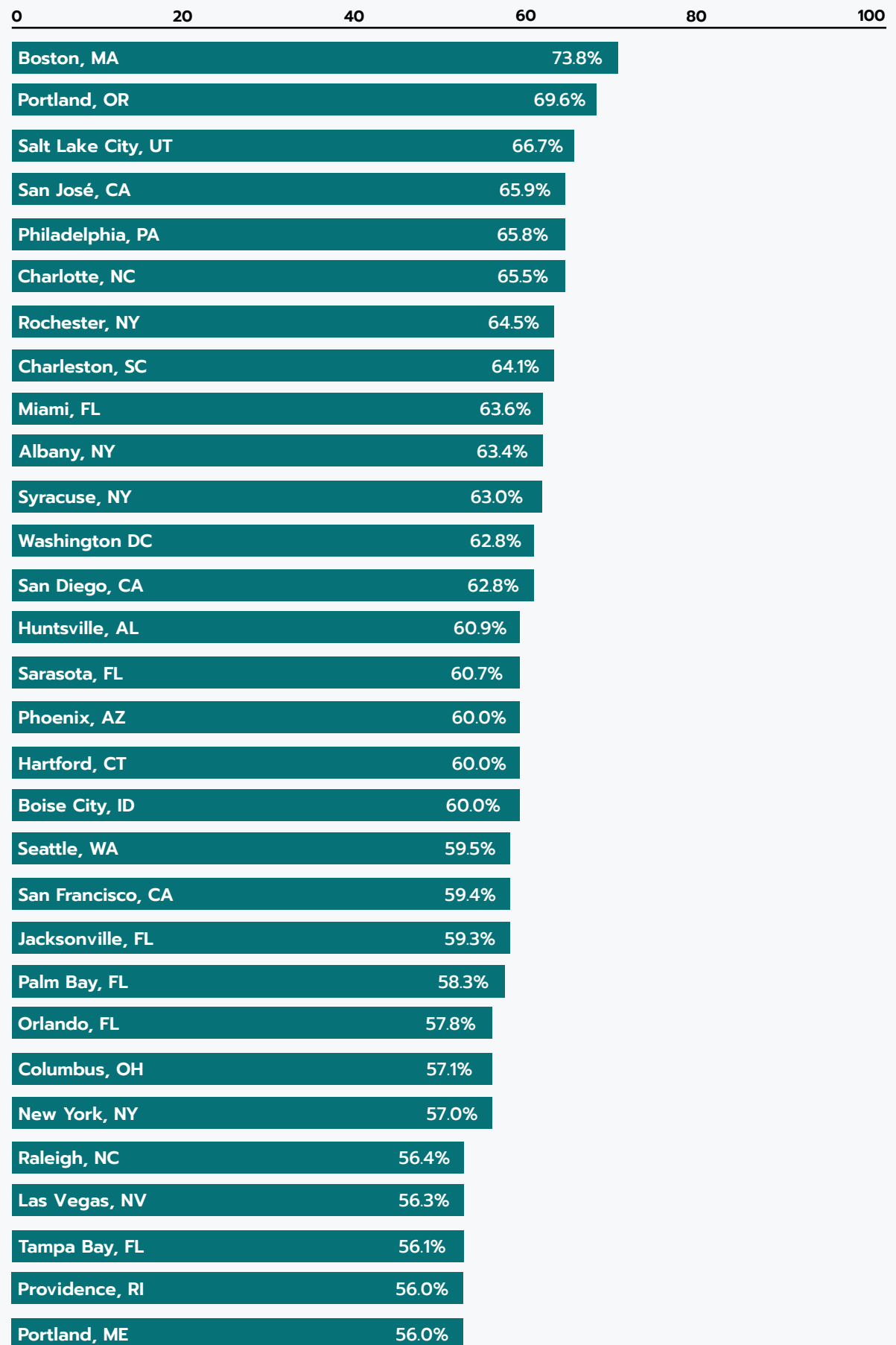
Hotels placing recycling bins in all common areas is an emerging practice.

- 41.1% of all hotels place recycling bins in all common areas.
- Prevalence rate in full service hotels (85.6%) is much higher compared to limited service hotels (32.9%).
- This is an established practice in convention hotels and resorts but is an emerging practice in extended stay and non-resort hotels.
- Across location types, prevalence of this practice is the highest for urban hotels (62.0%).
- Uptake rate of this practice is more than 50% in most STR chain scale segments, except for midscale and economy hotels, which have uptake rates of lower than 15%.
- The top three metropolitan areas that implement this practice are Boston, MA (73.8%), Portland, OR (69.6%), and Salt Lake City, UT (66.7%).



Emerging practice

Top 30 Metropolitan Areas





Recycling Regulations

Across the country, several states have implemented policies such as requirements and grants to increase recycling. Examples of such policies include:

California (CA):

- From 2019, California implemented a law which requires a business that generates 4 cubic yards or more of commercial solid waste or 8 cubic yards or more of organic waste per week to arrange for recycling services. Businesses that meet the above requirements and provide customers access to the business need to provide customers with a recycling bin with clear educational signage that is visible, easily accessible, and adjacent to each bin for unrecyclable waste, except in restrooms.

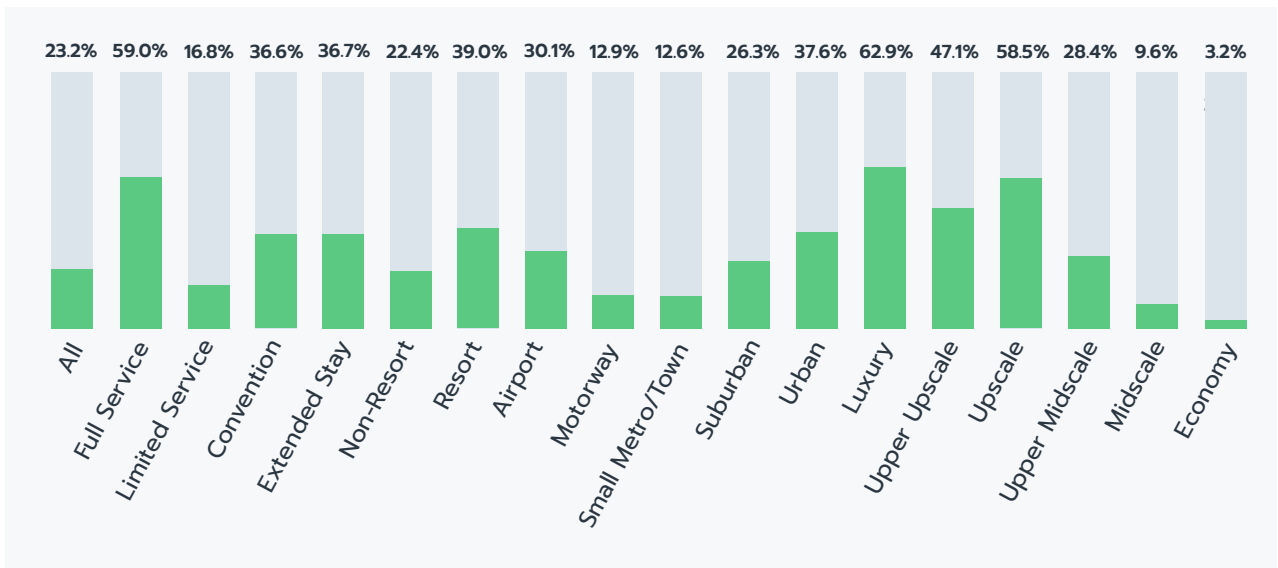
Colorado (CO):

- The Recycling Resources Economic Opportunity (RREO) and the Front Range Waste Diversion (FRWD) programs provide grants, rebates, and technical assistance to businesses and organizations to increase waste diversion, create local jobs, and promote equitable access to recycling and composting infrastructure in communities across Colorado.

→ RECYCLING BINS IN GUESTROOMS

Hotels placing recycling bins in guestrooms is an innovative practice.

- Almost one in four hotels place recycling bins in guestrooms.
- Uptake rate of this practice is more than three times in full service hotels (59.0%) compared to limited service hotels (16.8%).
- Prevalence of this practice is largely similar across all property types (36.6% to 39.0%), except for non-resorts with a prevalence rate of 22.4%.
- Compared to other location types, urban hotels (37.6%) have the highest prevalence rate of this practice.
- Across the STR chain scale, luxury hotels have the highest uptake levels for this practice at 62.9%, while economy hotels (3.2%) have the lowest levels.

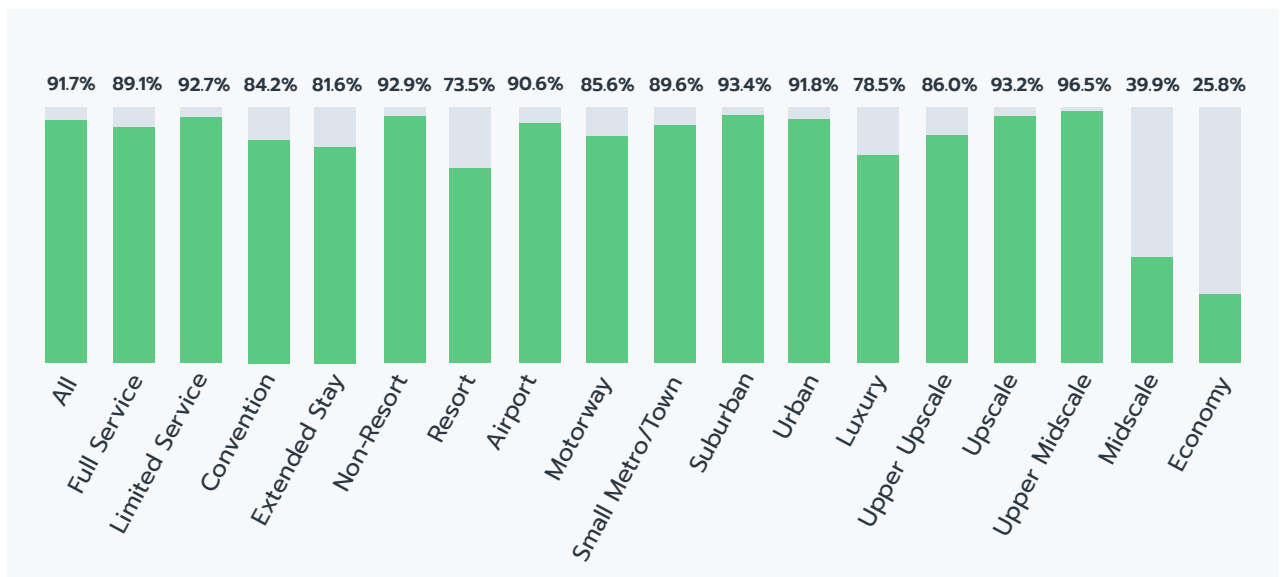


Innovative practice

→ SOAP DONATION

Hotels donating leftover bathroom amenities, such as soap bars, shampoo, and shower gel, is a common practice.

- More than nine in ten of all hotels donate leftover bathroom amenities such as soap bars, shampoo, and shower gel.
- Prevalence rate is slightly higher in limited service hotels (92.7%) compared to full service hotels (89.1%).
- This is a common practice for most property types with a prevalence rate between 81.6% and 92.9%, except for resorts (73.5%), where it is an established practice.
- Across the location types, prevalence rate of this practice is largely similar, ranging between 85.6% and 93.4%.
- This is a common practice for higher tiers in the STR chain scale with prevalence rates ranging from 78.5% to 96.5% and an emerging practice for midscale and economy segments (39.9% and 25.8% respectively).

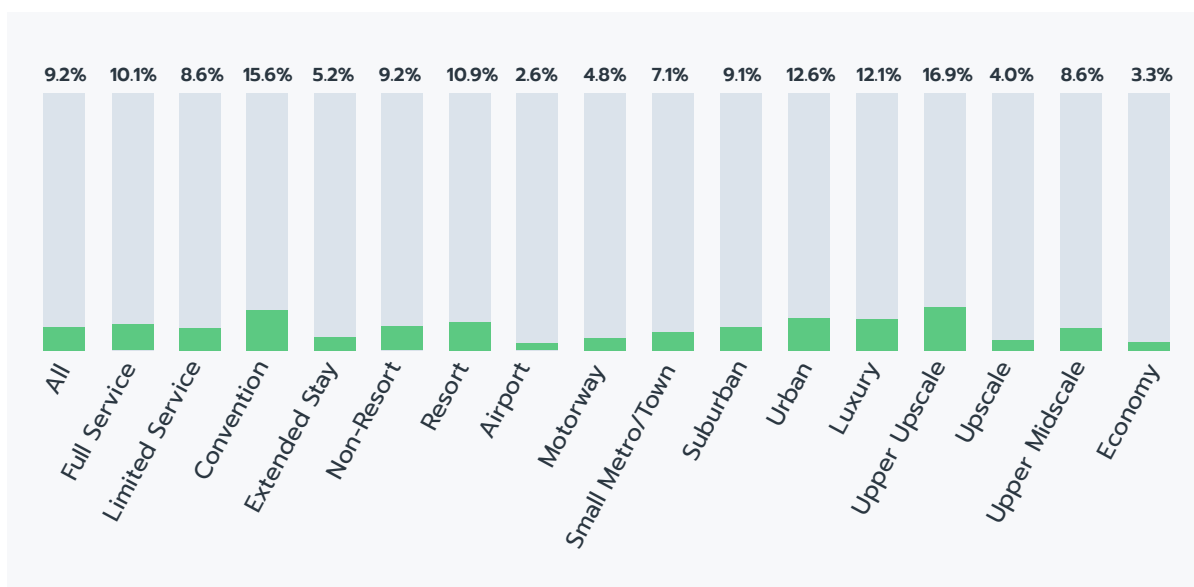


Common practice

→ **VENDOR TAKE-BACK PROGRAM**

Hotels having agreements with vendors for take-back recycling programs is an innovative practice.

- Almost one in ten hotels have agreements with vendors for take-back recycling programs.
- 10.1% of full service hotels implement this practice, slightly more than 8.6% of limited service hotels.
- Compared to other property types, convention hotels have the highest uptake rate of 15.6%, which is three times higher than extended stay hotels with the lowest uptake rate of 5.2%.
- Across location types, prevalence of this practice is highest in urban hotels (12.6%), while it is the lowest in airport hotels (2.6%).
- Upper upscale (16.9%) and luxury (12.1%) hotels have the highest prevalence rates across other STR chain scale segments, where remaining segments have prevalence rates of less than 10%.



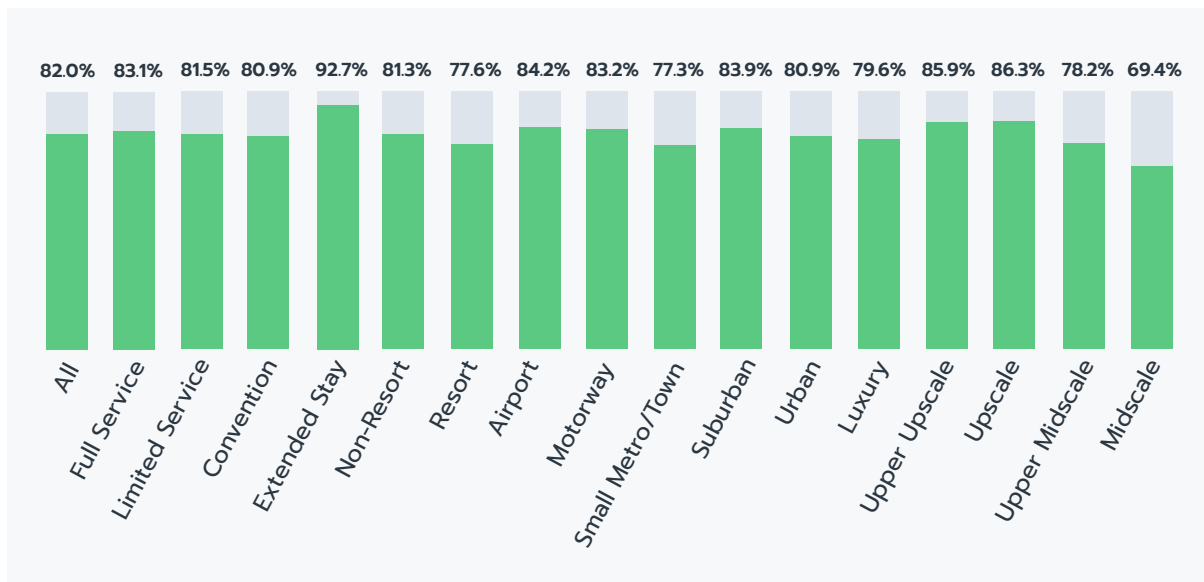
**Midscale category is excluded from the chart as data is insufficient.*

Innovative practice

→ FOOD WASTE PREVENTION STRATEGIES

Hotels implementing food waste prevention strategies is a common practice.

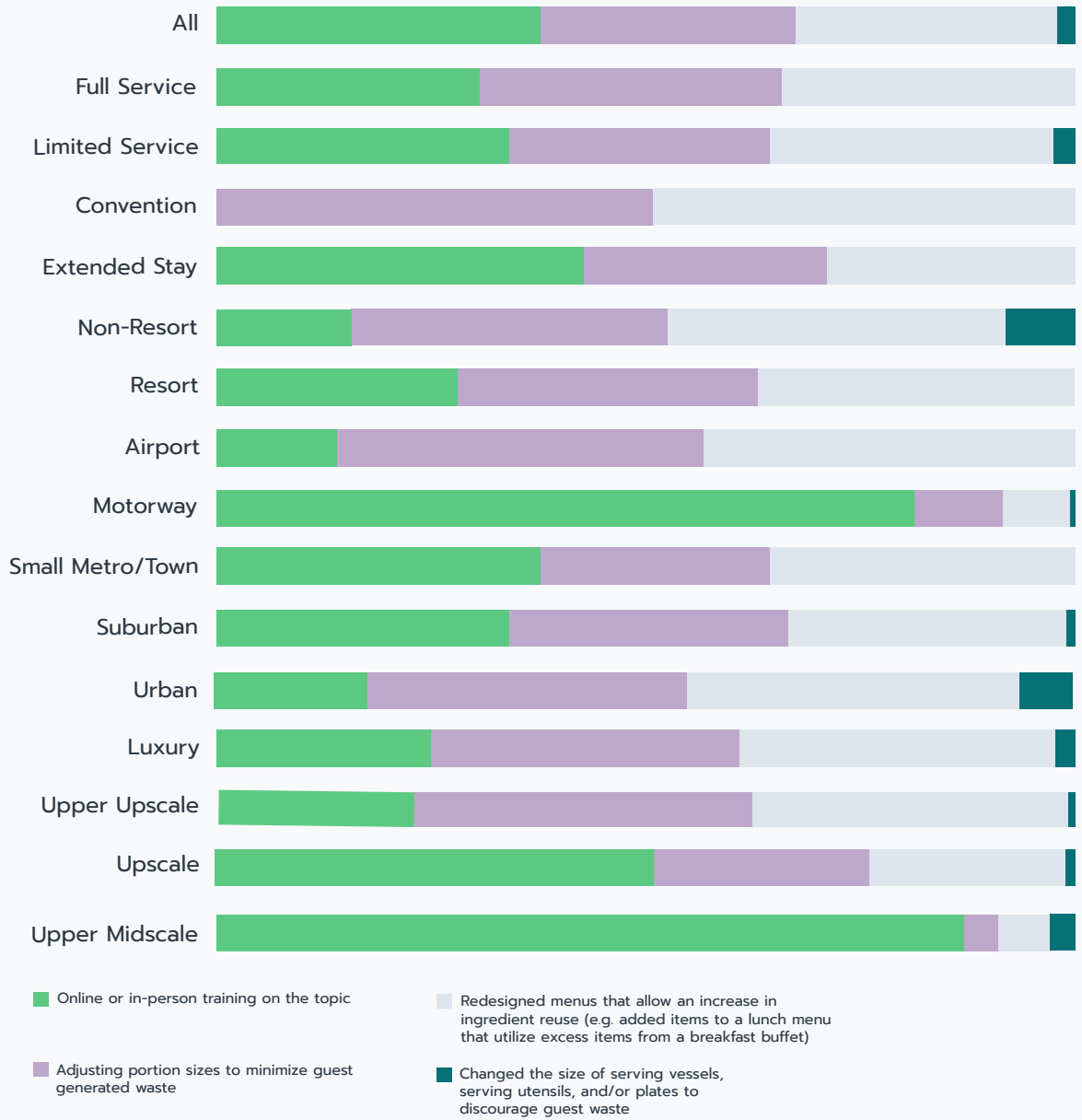
- 82.0% of all hotels implemented food waste prevention strategies in the last year.
- This is a common practice for most hotels, regardless of service, property, and location types, as well as STR chain scale segment.
- This is with the exception of midscale hotels, where it is an established practice with a prevalence rate of 69.4%.
- The top three food waste prevention strategies are equally popular and they are: adjusting food portion sizes (22.9%), conducting relevant staff training (22.8%), and redesigning menus to increase ingredient reuse (22.8%).



**Economy category is excluded from the chart as data is insufficient.*

Common practice

Types of Food Waste Prevention Strategies



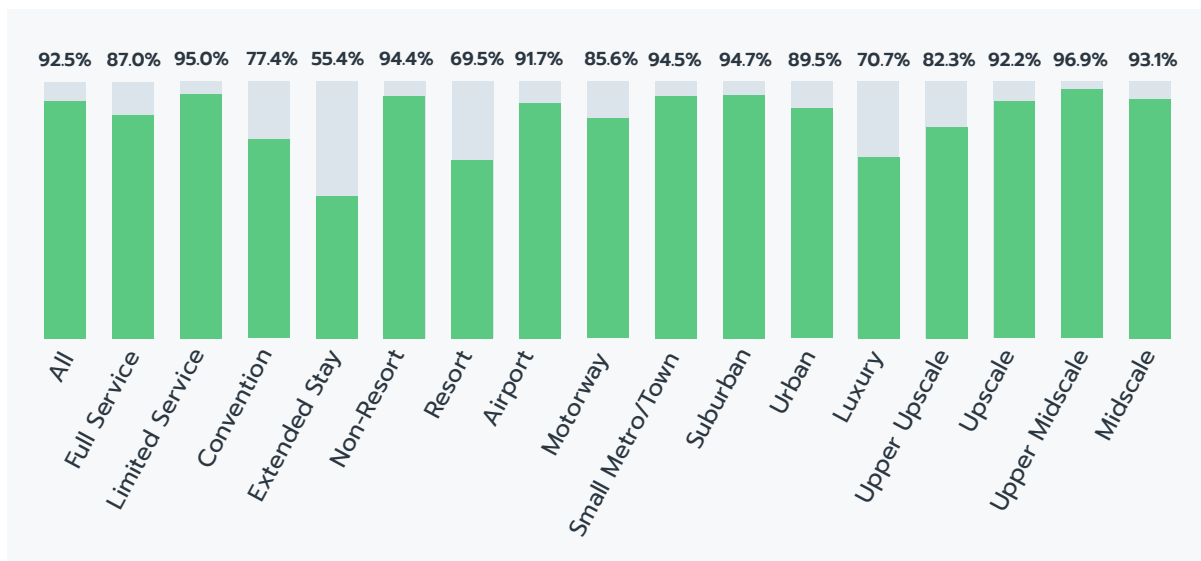
*Economy category is excluded from the chart as data is insufficient.

**The bars do not add up to 100% because multiple measures can be implemented.

→ FOOD WASTE DIVERSION

Hotels taking action to divert food waste from the landfill is a common practice.

- 92.5% of all hotels take actions to divert food waste from the landfill.
- The prevalence of this practice is slightly higher in limited service hotels (95.0%) compared to full service hotels (87.0%).
- Non-resort hotels (94.4%) have the highest uptake rate, while other property types fall within the range of 55.4% and 77.4%.
- Prevalence rate of this practice is largely similar across the location types, ranging between 85.6% and 94.7%.
- This is a common practice across the STR chain scale segments, except for luxury hotels, where it is an established practice with 70.7% prevalence.
- The top three methods of food waste diversion are: conversion to animal feed (86.1%), on-site composting (3.0%), and off-site composting (2.6%).



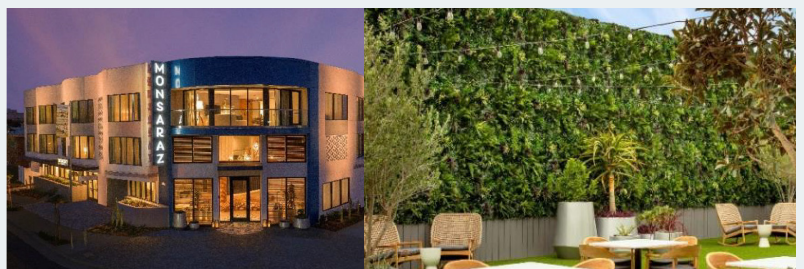
*Economy category is excluded from the chart as data is insufficient.

Common practice



The Monsaraz San Diego, Tapestry Collection by Hilton, San Diego

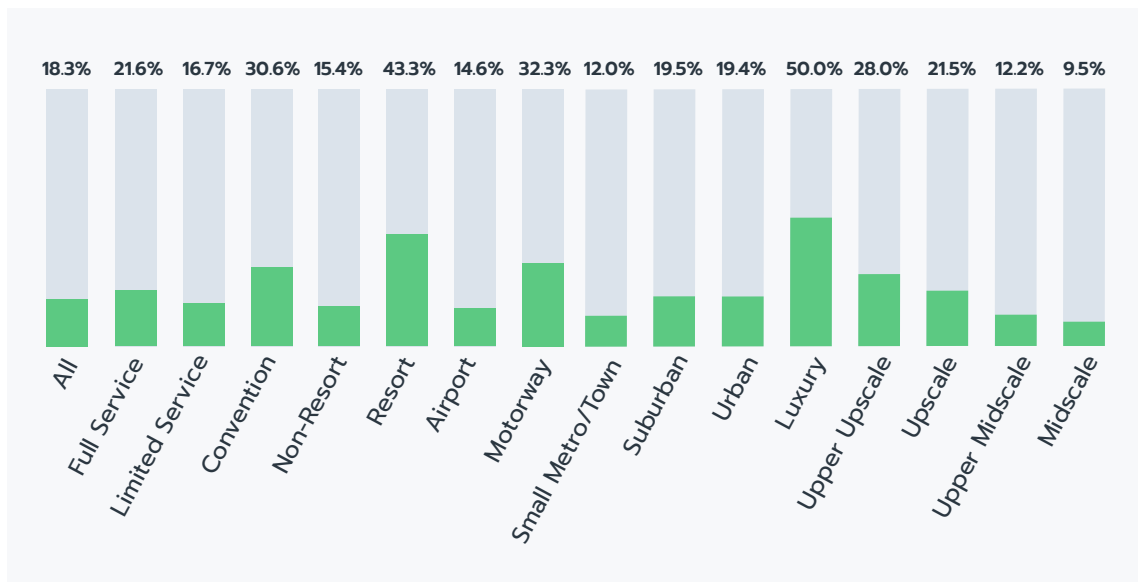
The hotel's restaurant operates a zero-waste kitchen. Some zero-waste efforts include utilizing freshly grown citrus from the hotel's courtyard and repurposing used coffee grounds as cocktail garnishes.



→ EXCESS FOOD DONATION

Hotels donating excess food is an innovative practice.

- Almost one in five hotels donate their excess food to community kitchens and programs.
- Full service hotels (21.6%) have a higher likelihood of donating excess food compared to limited service hotels (16.7%).
- Across property types, resorts have the highest uptake rate of this practice at 43.3%, while non-resorts have the lowest at 15.4%.
- Prevalence rates are largely similar across location types with a range between 12.0% and 19.5%, except for motorway hotels which have a prevalence rate of 32.3%.
- Uptake rate, at one in two hotels, is the highest in luxury hotels and decreases down the STR chain scale.



*Extended Stay and Economy categories are excluded from the chart as data is insufficient.

Innovative practice

SINGLE-USE PLASTIC ELIMINATION



→ **There are seven best practices assessed under single-use plastic elimination.** Two out of seven practices are established practices, two more are emerging practices, and the remaining three are innovative practices. More than half of all hotels have eliminated the use of plastic straws and replaced mini plastic toiletry bottles with bulk dispensers or non-plastic alternatives. The next two most prevalent practices are eliminating plastic stirrers and replacing plastic water bottles with other alternatives. More than one in ten hotels have installed water refill stations in public areas and compost used bioplastic products. Hotels that are more advanced on the plastic reduction journey are eliminating the use of all single-use plastics.

→ Key Findings

- **Established practices**

- 62.9% of hotels have eliminated the use of plastic straws.
- Approximately one in two hotels have replaced mini plastic toiletry bottles with bulk dispensers or non-plastic alternatives.

- **Emerging practices**

- 45.7% of hotels have eliminated the use of plastic stirrers.
- About two-fifths of all hotels have replaced plastic water bottles offered to guests and staff with reuse models, reusable options, or non-plastic alternatives.

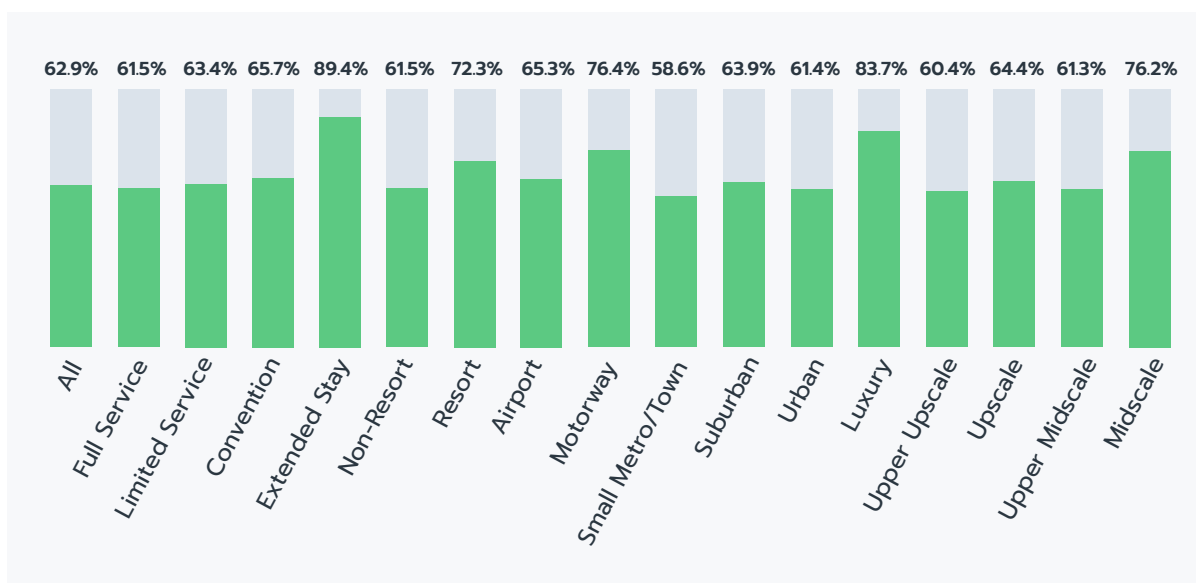
- **Innovative practices**

- 12.4% of hotels have installed water refill stations in public areas to reduce the use of disposable plastic water bottles.
- About a tenth of all hotels that use bioplastic products send them for composting at their end-of-life.
- 1.2% of all hotels have eliminated single-use plastics (or reduced them to an absolute minimum).

→ PLASTIC STRAWS

Hotels eliminating and/or replacing plastic straws with non-plastic alternatives is an established practice.

- 62.9% of all hotels have eliminated the use of plastic straws.
- Compared to the overall average, the prevalence of this practice was slightly higher for limited service hotels at 63.4% and slightly lower for full service hotels at 61.5%.
- Across property types, extended stay hotels have the highest prevalence rate of 89.4% followed by resorts with a prevalence rate of 72.3%.
- The difference in prevalence rates across location types is small. Across the location types, motorway hotels rank the highest (76.4%), while hotels from small metros/towns rank the lowest (58.6%).
- Across the STR chain scale segments, luxury hotels take the top spot at 83.7%, followed by midscale hotels at 76.2%.



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Established practice



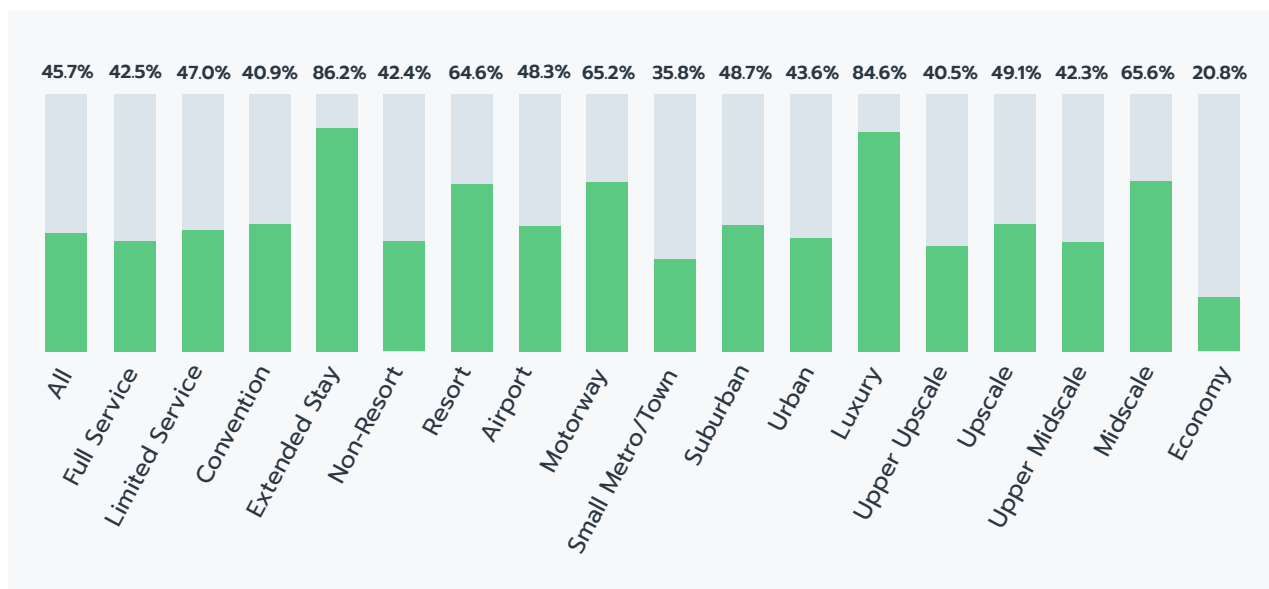
Plastic Straw Ban

Multiple cities and states have imposed a plastic straw ban. The policies generally prohibit food and beverage establishments from providing single-use plastic straws to customers unless the customer requests for one. Example of states that implemented such policies state-wide include Florida, Hawaii, and Colorado. Cities such as San Francisco, New York City, and Charleston that are not under state-wide regulations have also [implemented their own bans](#).

→ PLASTIC STIRRERS

Hotels eliminating and/or replacing plastic stirrers with non-plastic alternatives is an emerging practice.

- 45.7% of hotels have eliminated the use of plastic stirrers.
- The variations observed across the different asset class, property, and location types, as well as STR chain scale segments for plastic stirrers are similar to that of plastic straws, but often at a lower prevalence rate.
- The prevalence of this practice was slightly higher for limited service hotels at 47.0% compared to full service hotels at 42.5%.
- Across the property types, extended stay hotels (86.2%) and resorts (64.6%) have significantly higher uptake rate compared to the overall average.
- Prevalence of this practice are largely similar across different location types, with the exception of motorway hotels having the highest prevalence rate of 65.2%.
- Luxury hotels have the highest uptake rate amongst the STR chain scale segments at 84.6%, which is more than four times higher than economy hotels (20.8%).

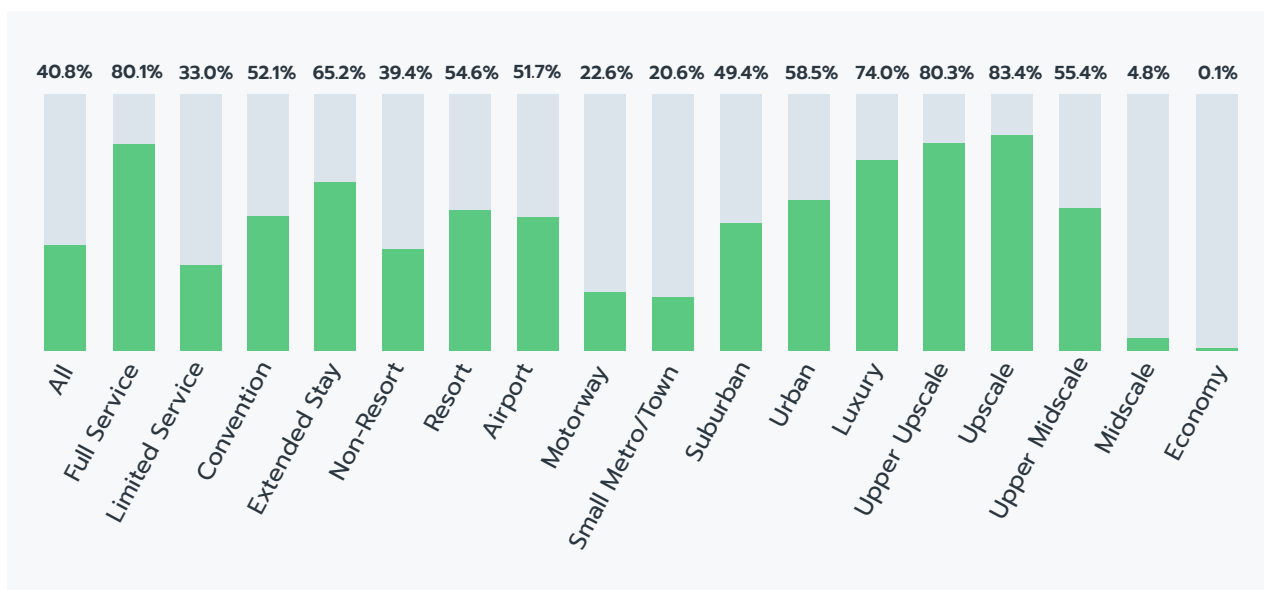


Emerging practice

→ PLASTIC WATER BOTTLES

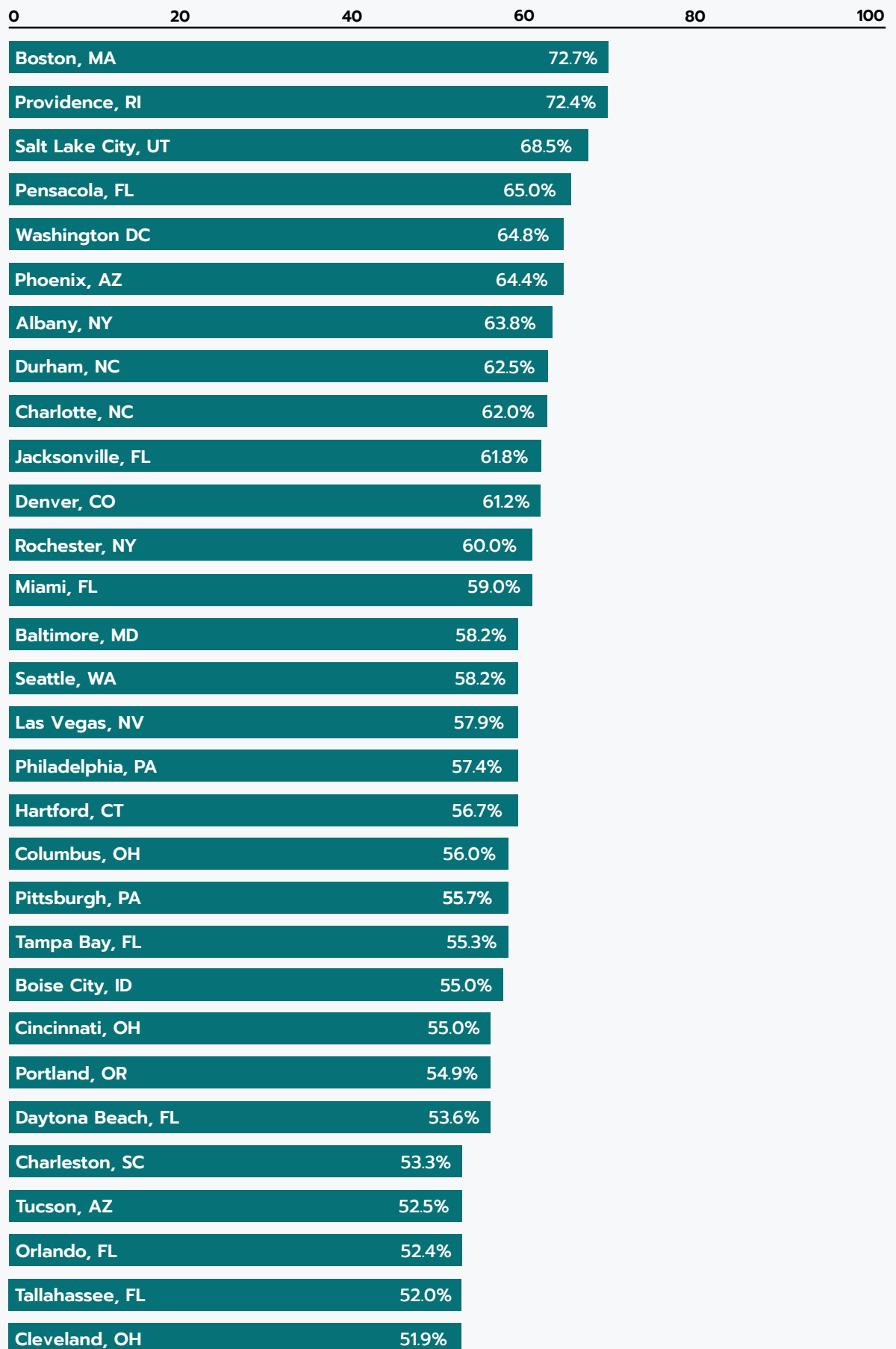
Hotels replacing plastic water bottles offered to guests and staff with reuse models, reusable options, or non-plastic alternatives is an emerging practice.

- 40.8% of all hotels have replaced plastic water bottles offered to guests and staff with sustainable alternatives such as reuse models, reusable options, or non-plastic alternatives.
- Almost twice as many full service hotels (80.1%) have replaced plastic bottles compared to the overall average, while only 33.0% of limited service hotels have done the same.
- The practice is established across all property types with a range of 52.1% to 65.2%, except for non-resorts (39.4%), where it is still an emerging practice.
- Across location types, urban (58.5%), airport (51.7%), and suburban (49.4%) hotels have uptake rates higher than the overall average, while the remaining locations have around half the uptake rate of the overall average.
- Across the STR chain scale, the practice is either established or common, except for midscale and economy hotels, which have a less than 5% prevalence rate.
- The top three metropolitan areas that have replaced water bottles are Boston, MA (72.7%), Providence, RI (72.4%), and Salt Lake City, UT (68.5%).



Emerging practice

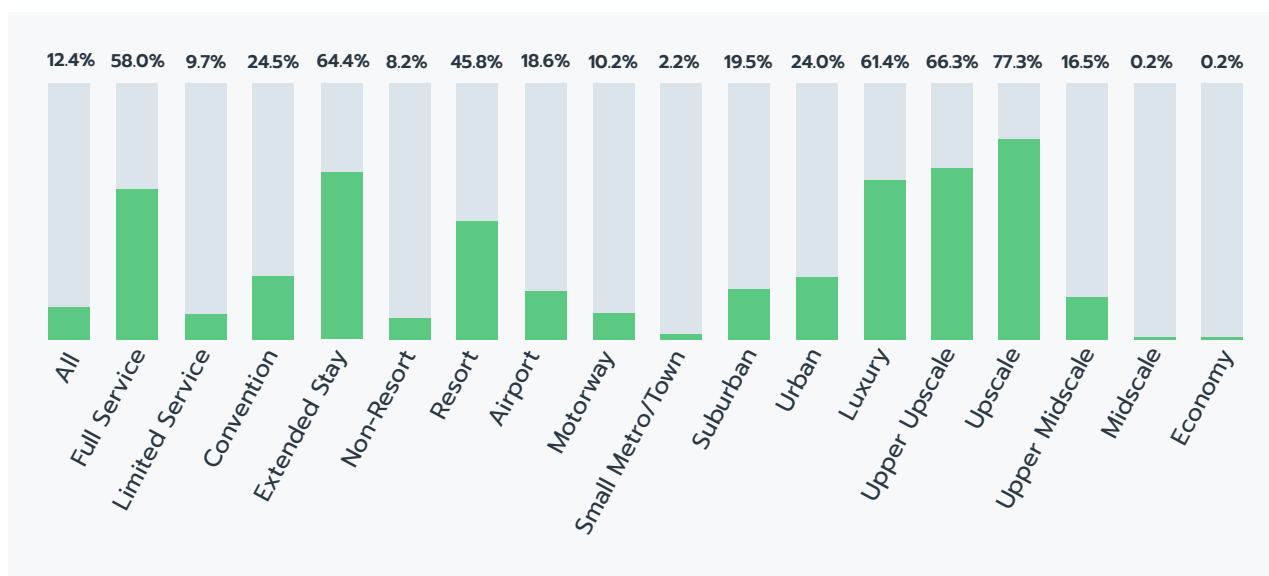
Top 30 Metropolitan Areas



→ WATER REFILL STATIONS

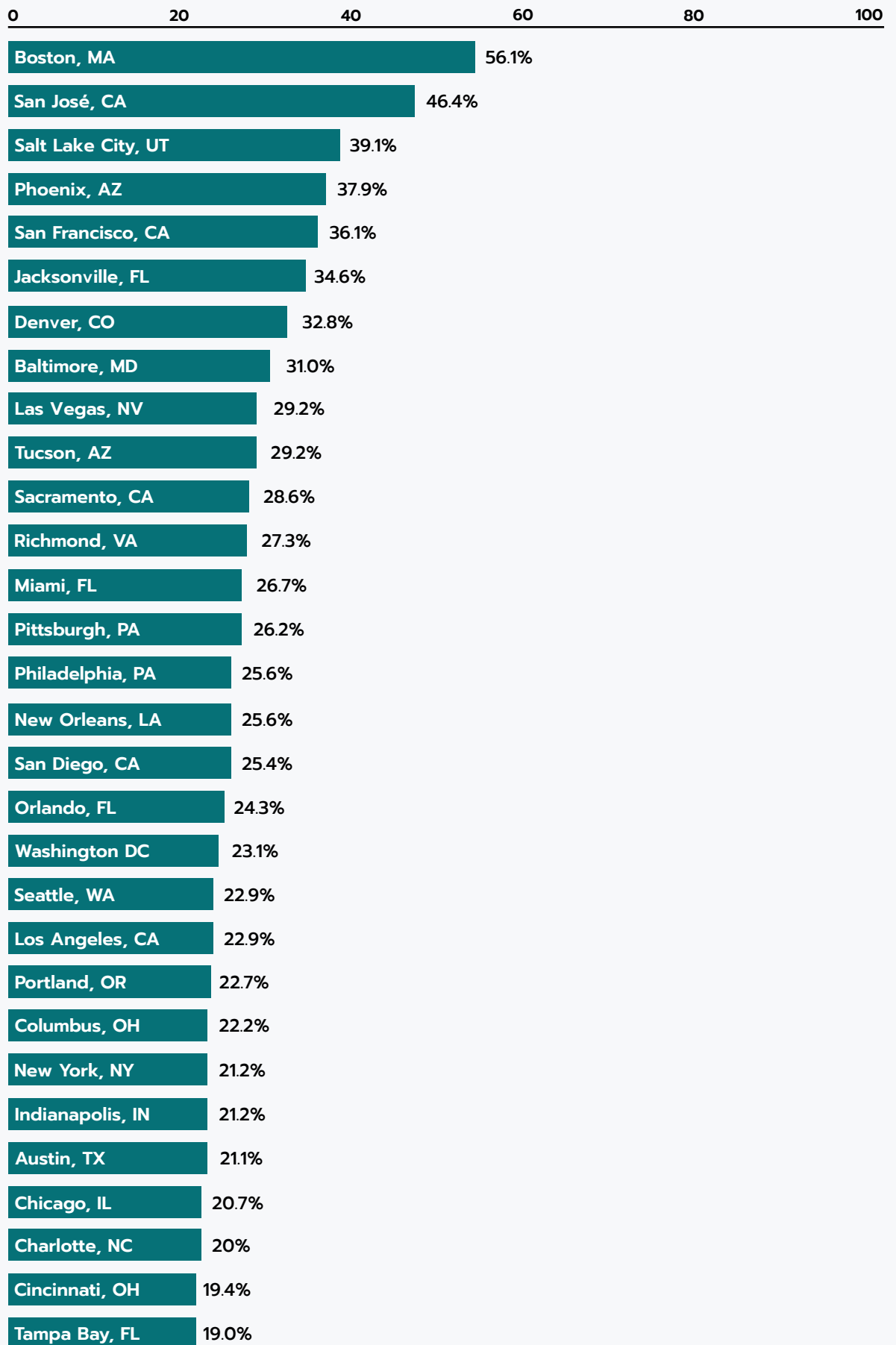
Hotels installing water refill stations in public areas, such as corridors, is an innovative practice.

- Nearly one in eight hotels have installed water refill stations in public areas to reduce the use of disposable plastic water bottles.
- Full service hotels (58.0%) are almost six times as likely as limited service hotels (9.7%) to implement this practice.
- Across the property types, the prevalence rate is generally less than 50%, except for extended stay hotels with a prevalence rate of 64.4%.
- This is an innovative practice across location types, with all location types having prevalence rates of less than 25%.
- Midscale and economy hotels have the lowest prevalence rates of 0.2% for this practice, followed by Upper Midscale (16.5%). Prevalence rates increase to more than 60% for the higher tiers of the STR chain scale, with upscale hotels having the highest prevalence at 77.3%.
- The top three metropolitan areas that have replaced water bottles are Boston, MA (56.1%), San José, CA (46.4%), and Salt Lake City, UT (39.1%).



Innovative practice

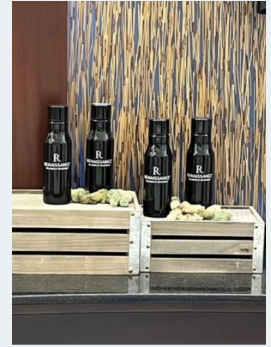
Top 30 Metropolitan Areas





*Renaissance Orlando
at Sea World*

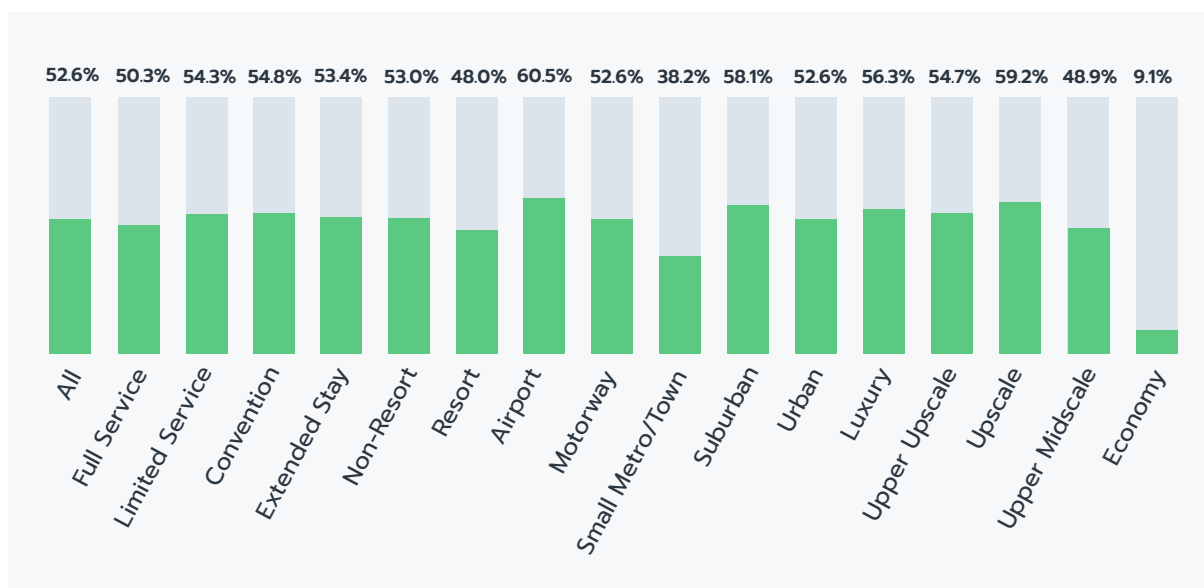
This hotel installed water refill stations throughout the hotel and offers guests reusable aluminum bottles in place of single-use plastic bottles.



→ MINI PLASTIC TOILETRY BOTTLES

Hotels replacing mini plastic toiletry bottles with bulk dispensers or non-plastic alternatives is an established practice.

- More than one in two hotels have replaced mini plastic toiletry bottles with bulk dispensers or non-plastic alternatives.
- Compared to the overall average, the prevalence of this practice was slightly higher for limited service hotels at 54.3% and slightly lower for full service hotels at 50.3%.
- Prevalence of this practice is largely similar across property types, ranging between 48.0% to 54.8%.
- This is an established practice for hotels in all locations, except small metro/town hotels (38.2%), where it is an emerging practice.
- There is little variance in the prevalence of this practice across the STR chain scale segments (48.9% to 59.2%), except for economy hotels, which have a prevalence of 9.1%.
- For hotels that implement this practice, 98.5% do so in guestrooms. Less than 2% replace mini plastic toiletry bottles in other areas of the property (pool, gym, spa).



*Midscale category is excluded from the chart as data is insufficient.

Established practice



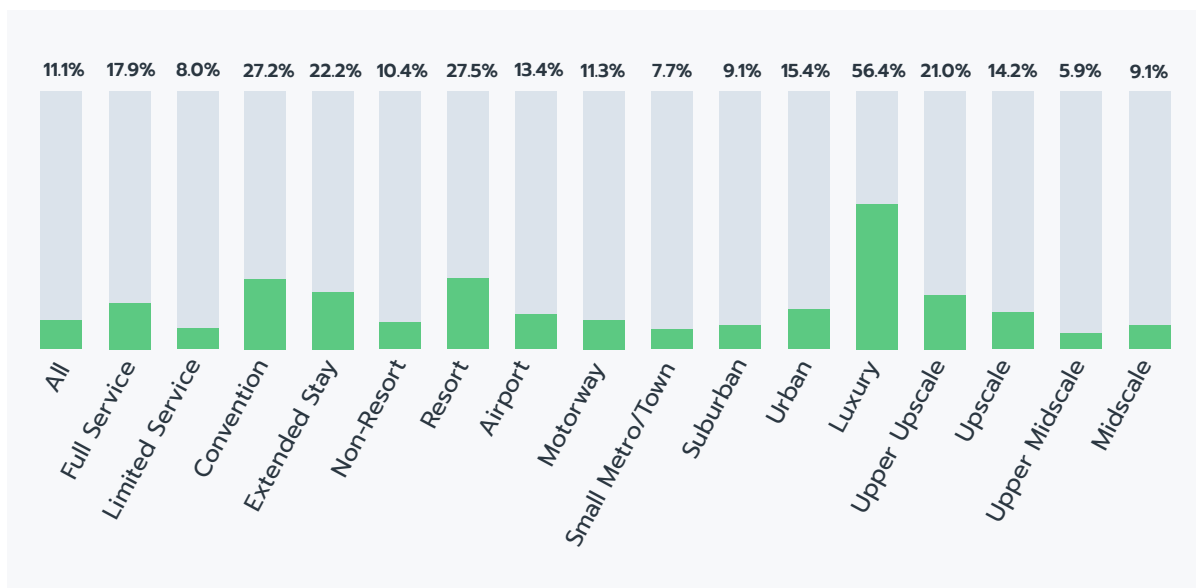
California and New York's Ban on Mini Plastic Toiletry Bottles

California and New York passed laws to ban single-use travel-sized plastic bottles for personal care products like shampoo and lotion in hotels. The bans will take effect on hotels with 50 rooms or more in 2023 and 2024 for California and New York respectively, while smaller lodging establishments will only be subjected to the ban from 2024 and 2025 onwards.

→ COMPOSTING BIOPLASTIC PRODUCTS

Hotels sending used bioplastic products for composting at their end-of-life is an innovative practice.

- One in nine of all hotels that use bioplastic products send them for composting at their end-of-life.
- 17.9% of full service hotels have implemented this practice, which is more than two times higher than limited service hotels (8.0%).
- Prevalence of this practice remains largely similar across property types (22.2% to 27.5%) but falls to 10.4% for non-resorts.
- This is an innovative practice for all location types, with prevalence rate ranging from 7.7% to 15.4%.
- Prevalence of this practice is generally low across the STR chain scale (5.9% to 21.0%), except for luxury hotels with a prevalence rate close to 60%.



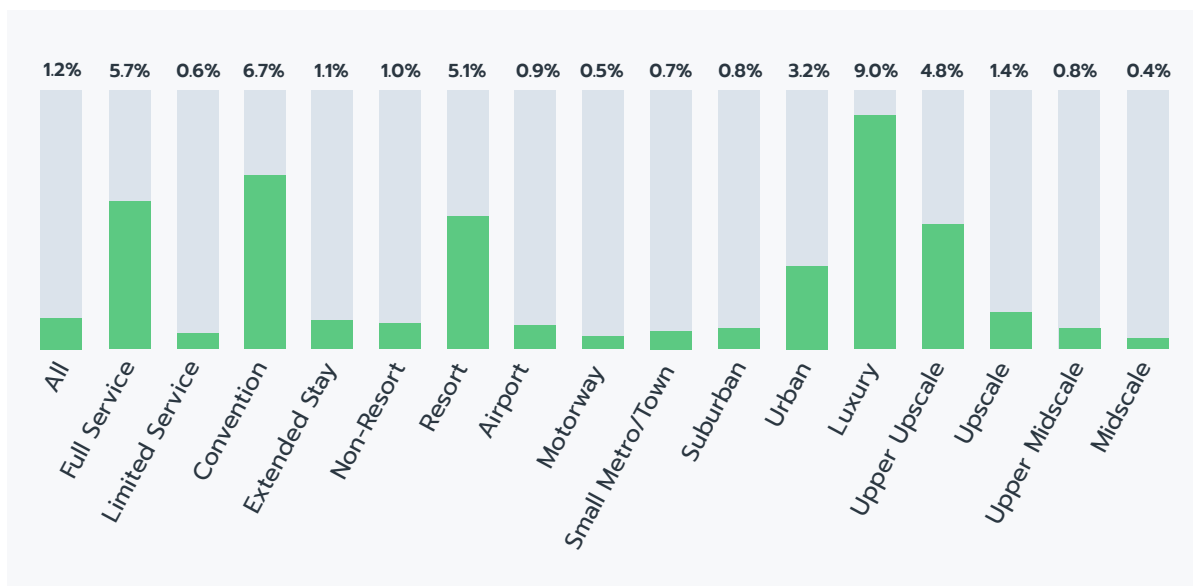
**Economy category is excluded from the chart as data is insufficient.*

Innovative practice

→ SINGLE-USE PLASTIC ELIMINATION

Hotels eliminating single-use plastics or reducing them to an absolute minimum is an innovative practice.

- 1.2% of all hotels have eliminated single-use plastics (or reduced them to an absolute minimum).
- The prevalence rate is higher for full service hotels (5.7%) compared to limited service hotels (0.6%).
- Convention hotels have the highest uptake rate of 6.7% out of all property types, followed by resorts with an uptake rate of 5.1%.
- Most location types have an uptake rate of below 1%, except urban hotels which have a 3.2% uptake rate.
- Prevalence rate of eliminating single-use plastics is highest for luxury hotels (9.0%), and it continues to decrease down the STR chain scale segments.



**Economy category is excluded from the chart as data is insufficient.*

Innovative practice

RESPONSIBLE CONSUMPTION



→ **Ten best practices for responsible consumption are assessed.** Four of them are common practices, where almost all hotels implement linen and towel reuse programs, offer opt out options for daily housekeeping, and source at least one type of produce/product from sustainable sources. An emerging practice that is implemented by around half of all hotels is purchasing at least 50% of their food and beverage items from fair trade sources. The remaining five practices have relatively low rates of implementation. They include sourcing from local food and beverage providers, providing vegetarian and vegan options, procuring sustainable seafood, and purchasing organic food and beverage items.

→ KEY FINDINGS

- **Common practices**

- Most hotels (99.5%) implement a linen reuse program.
- Towel reuse programs are in place across virtually all hotels (99.4%).
- Virtually all hotels (99.4%) offer guests the choice to opt out of daily housekeeping.
- Nearly all hotels (99.1%) are taking action to source for at least one type of produce/product sustainably.

- **Established practices**

- 46.5% of hotels purchase at least half of their food and beverage items from fair trade sources (by spend).

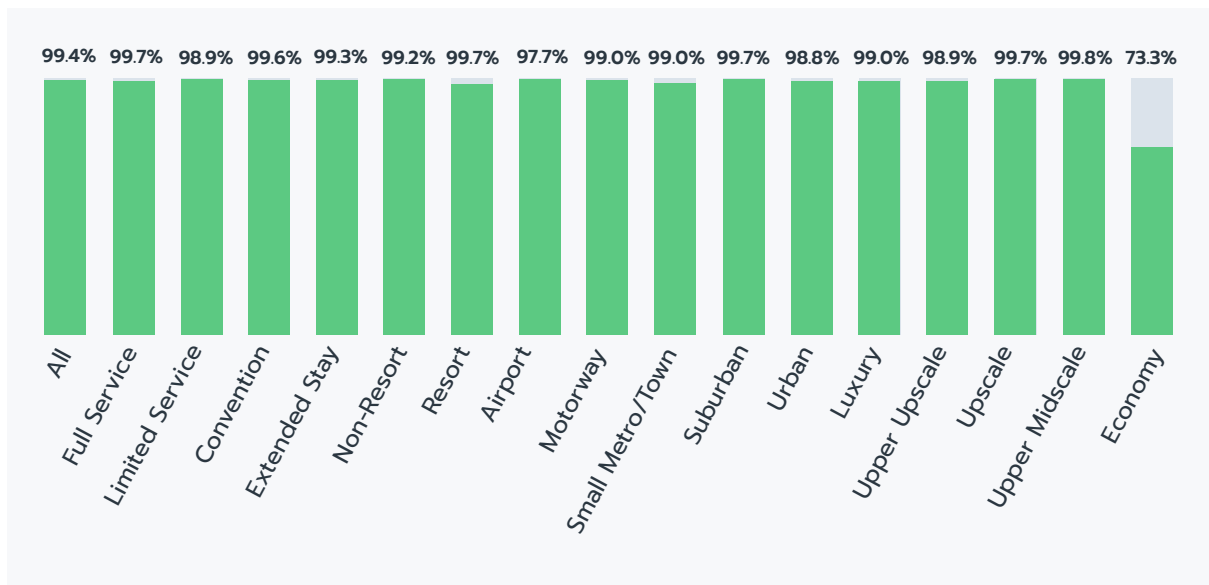
- **Innovative practices**

- 17.1% of hotels purchase at least half of their food and beverages from local providers (by spend).
- One in ten hotels provide vegetarian options for every course and every meal.
- 9.5% of hotels purchase at least half of their seafood purchases from certified sustainable sources (by spend).
- 5.7% of all hotels offer vegan menu options for every course and meal.
- 5.2% of hotels purchase at least half of their food and beverages from organic sources (by spend).

→ HOUSEKEEPING OPT-OUT

Hotels giving guests the choice to opt out of housekeeping services altogether for one or more nights is a common practice.

- Virtually all hotels (99.4%) offer guests the choice to opt out of daily housekeeping.
- High prevalence of more than 97% is typically observed, regardless of service type, property type, location, and STR chain scale segment.
- Economy hotels have a lower prevalence of 73.3% for this practice.



**Midscale category is excluded from the chart as data is insufficient.*

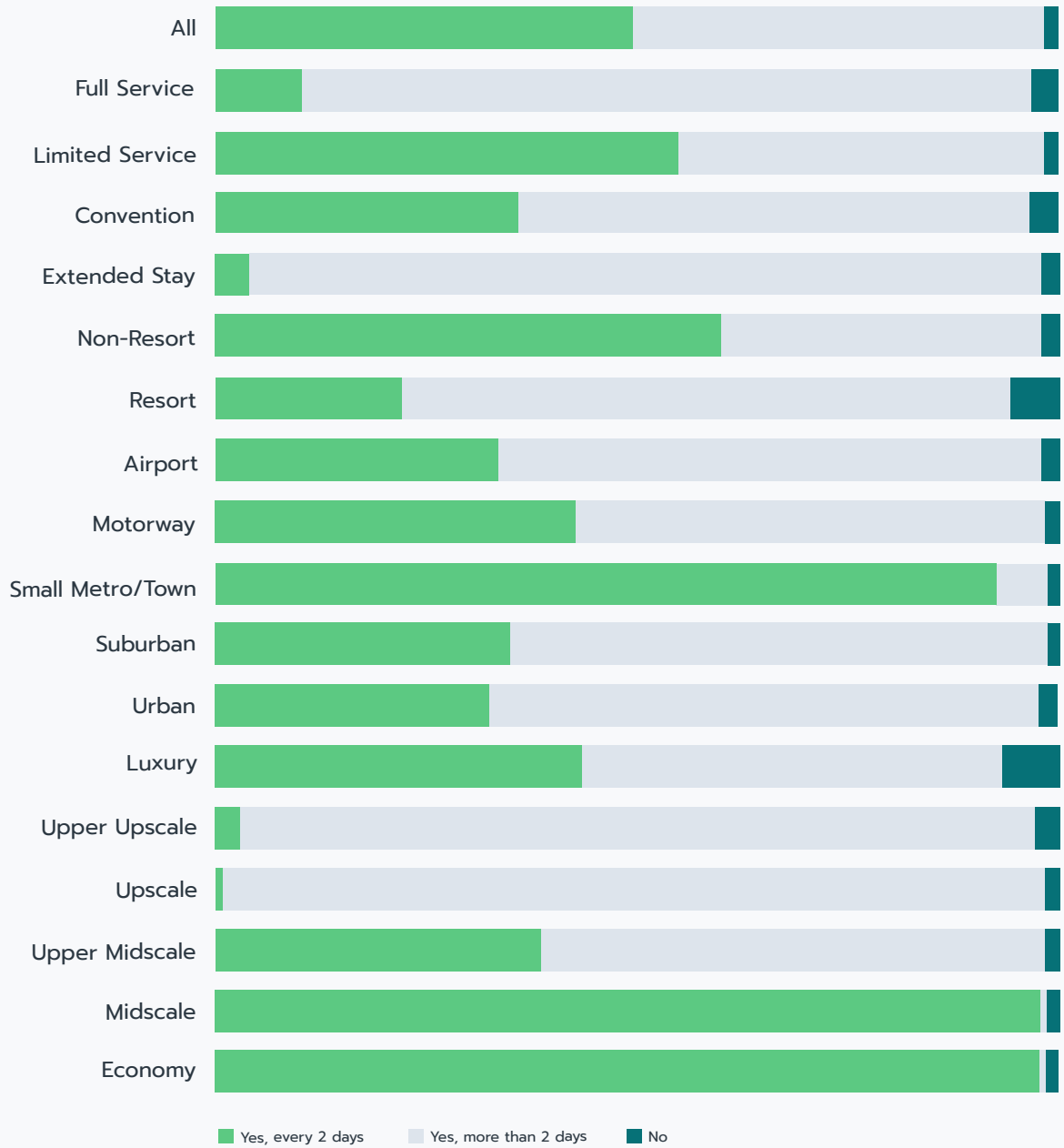
Common practice

→ LINEN REUSE PROGRAM

Hotels putting in place a linen reuse program that changes linens every 2 days by default, except upon guest request or check-out, is a common practice.

- Most hotels (99.5%) implement a linen reuse program.
- There is high uptake of this practice (more than 94%), regardless of service type, property type, location, and STR chain scale segment.
- 85.9% of full service hotels change linens after more than 2 days by default. This is practiced by 42.9% of limited service hotels.
- The proportion of hotels that change linens after more than 2 days by default generally increases from economy (0.6%) to upper upscale (93.2%) and upscale (96.4%), but falls to almost half for luxury hotels (48.6%).

Linen Reuse Program

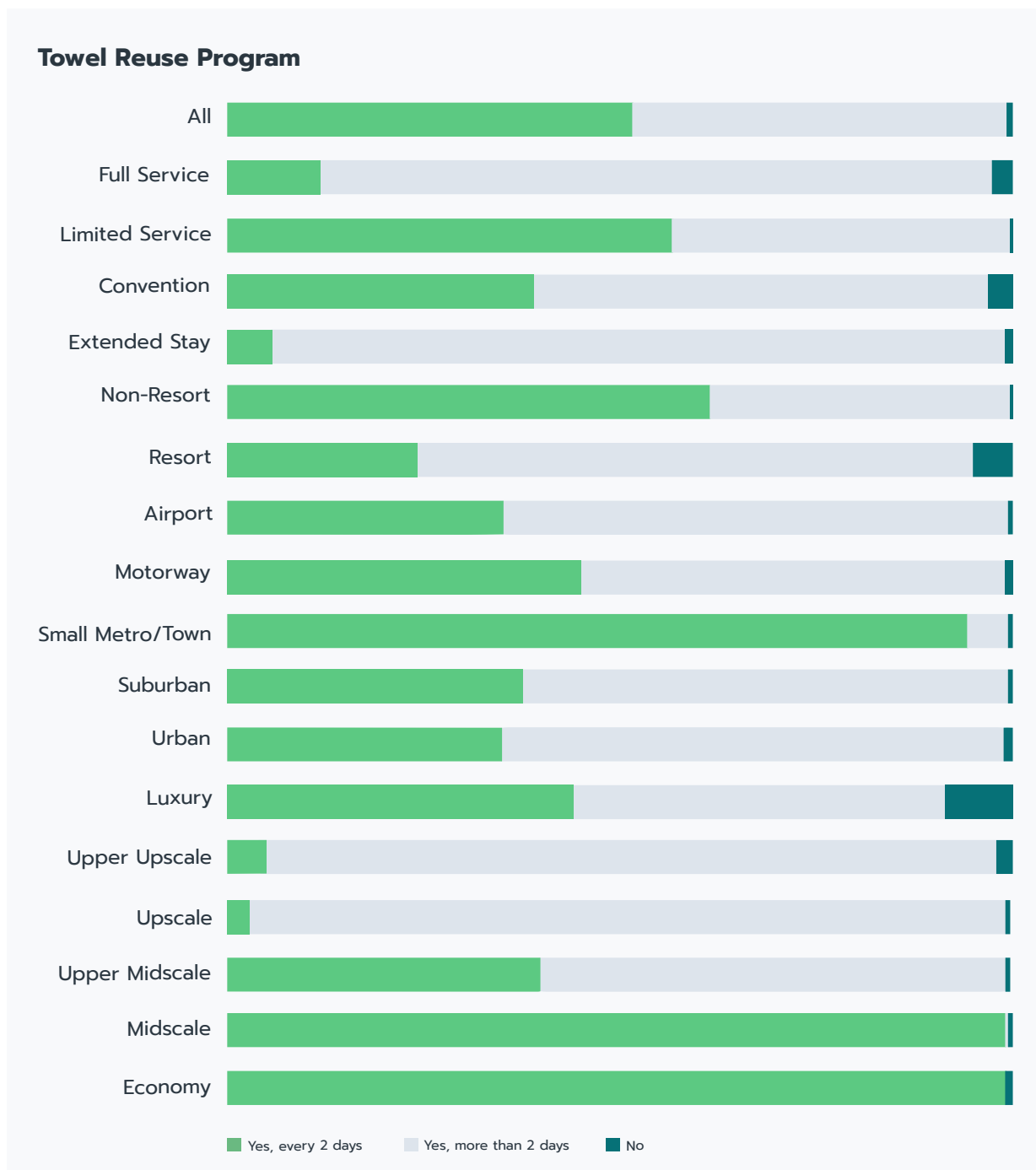


Common Practice

→ TOWEL REUSE PROGRAM

Hotels putting in place a towel reuse program that changes towels every 2 days by default, except upon guest request or check-out, is a common practice.

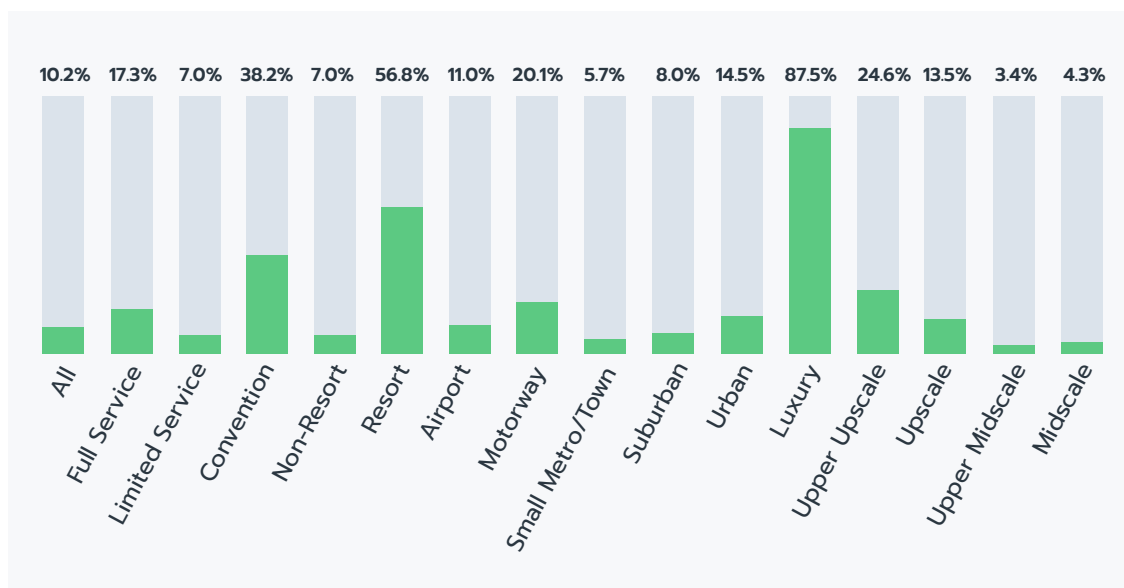
- Towel reuse program is in place across virtually all hotels (99.4%).
- Similar to linen reuse program, hotels across all service type, property type, location, and STR chain scale segment have uptake rates of more than 90%.
- The proportion of hotels changing towels every 2 days or more is similar to that of changing linens as well.



→ VEGETARIAN MENU OPTIONS

Hotels offering vegetarian menu options for every course (e.g., appetizer, main dish, and dessert) and every meal (i.e., breakfast, lunch, and dinner) is an innovative practice.

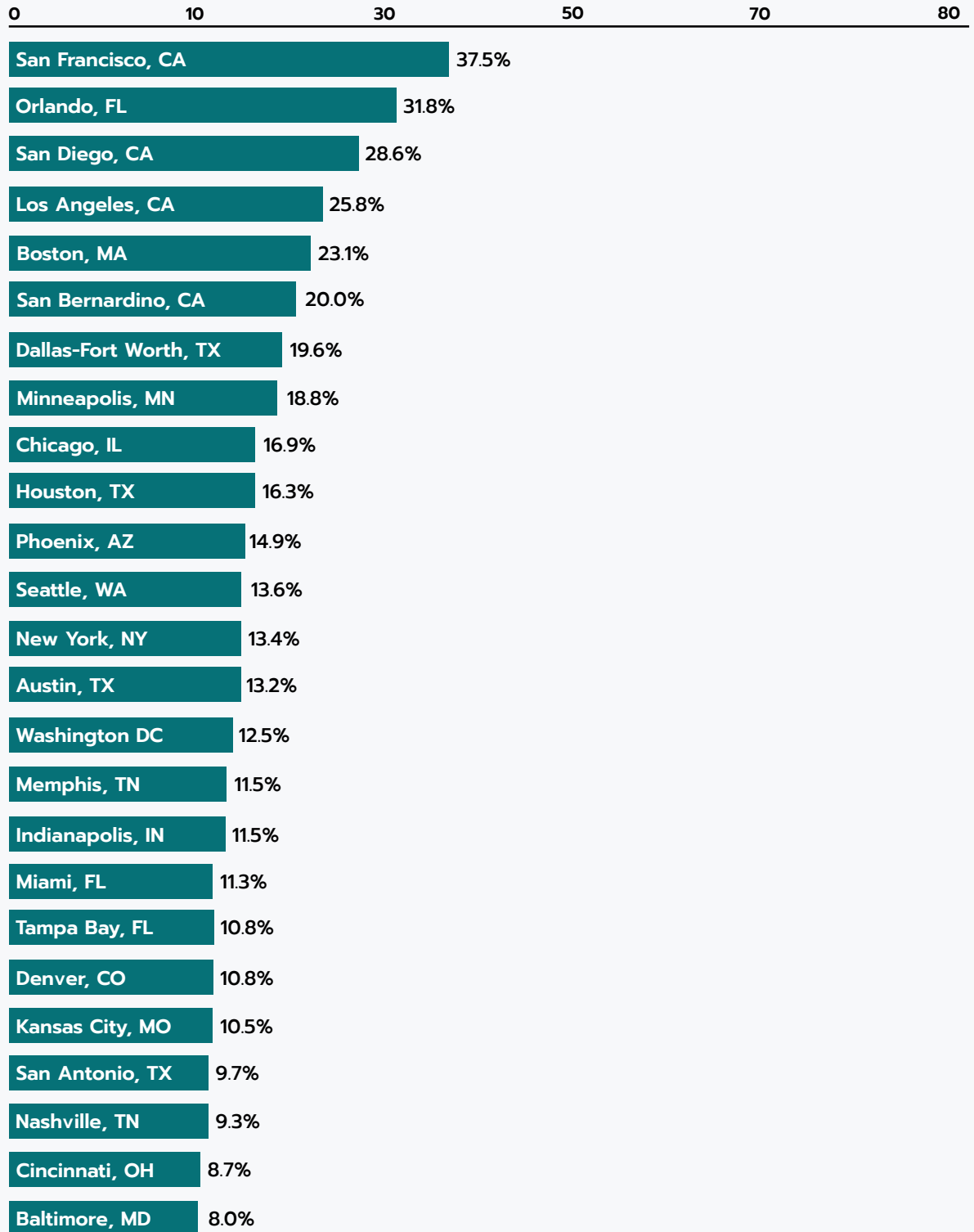
- One in ten hotels provide vegetarian options for every course and every meal.
- Prevalence of this practice is higher in full service hotels (17.3%) compared to limited service hotels (7.0%).
- Resorts have the highest uptake rate of 56.8% compared to other property types.
- Across the STR chain scale segments, this is a common practice at luxury hotels (87.5%) and an innovative practice for other segments with uptake rates between 3.4% to 24.6%.
- Top three metropolitan areas for this practice are San Francisco, CA (37.5%), Orlando, FL (31.8%), and San Diego, CA (28.6%).



*Extended Stay and Economy categories are excluded from the chart as data is insufficient.

Innovative practice

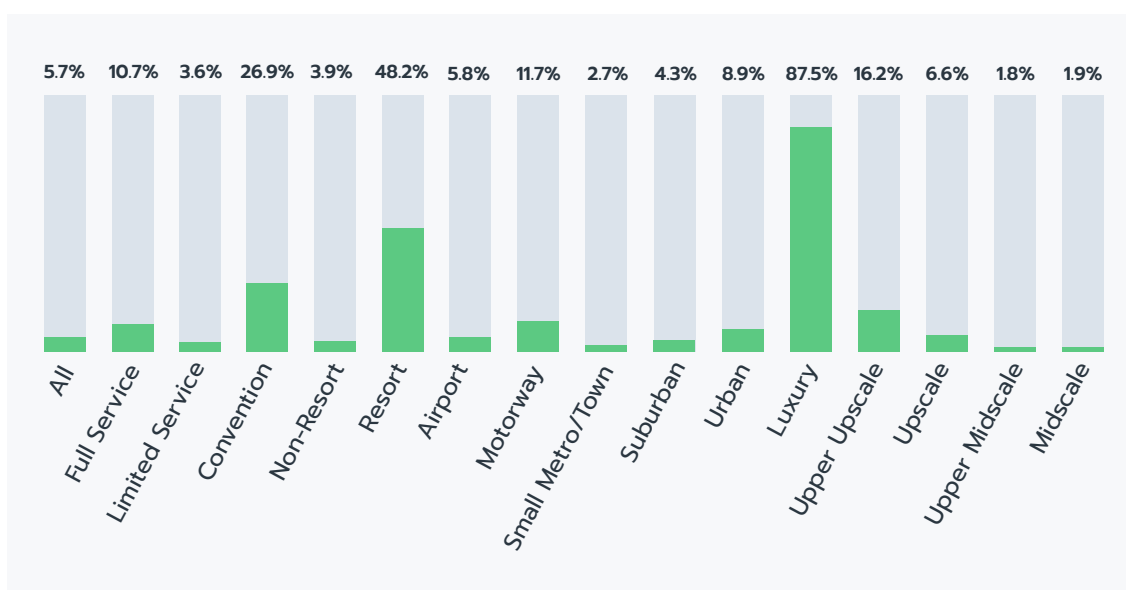
Top 25 Metropolitan Areas



→ VEGAN MENU OPTIONS

Hotels offering vegan menu options for every course (e.g., appetizer, main dish, and dessert) and every meal (i.e., breakfast, lunch, and dinner) is an innovative practice.

- 5.7% of all hotels offer vegan menu options for every course and meal, suggesting that hotels are half as likely to provide vegan options compared to vegetarian options.
- Variance of uptake rates across service type, property type, location, and STR chain scale segment is largely similar to the practice on vegetarian options, but with lower values.
- Uptake rate of this practice is three times higher in full service hotels (10.7%) than limited service hotels (3.6%).
- Almost half of all resorts (48.2%) implement this practice, while only 3.9% of non-resort hotels do the same.
- Luxury hotels are the most likely to provide vegan menu options, with a prevalence rate of 87.5%.



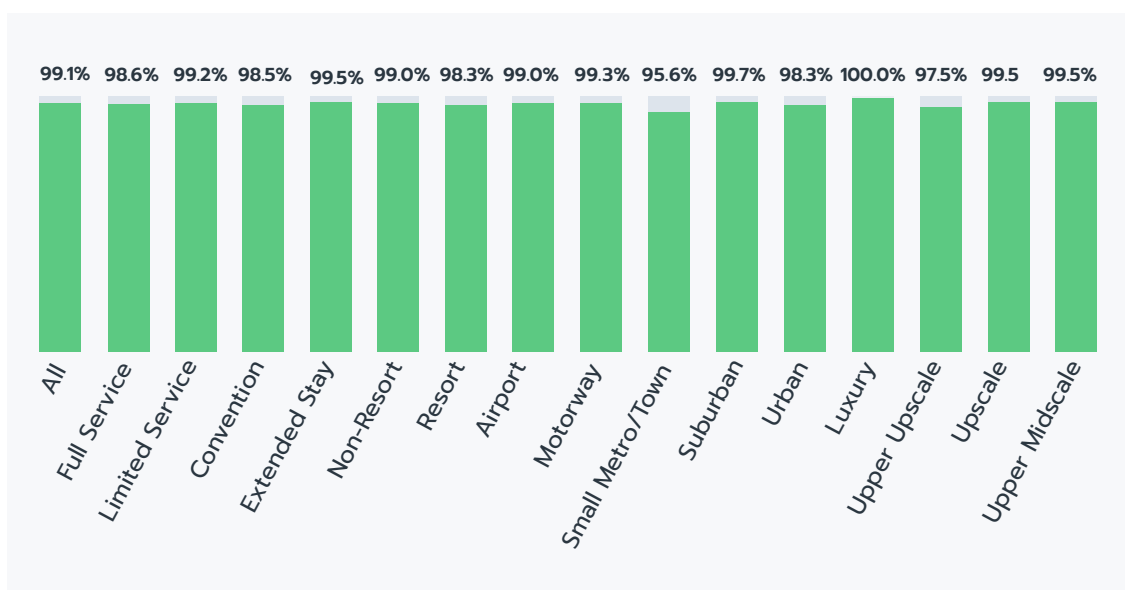
**Extended Stay and Economy categories are excluded from the chart as data is insufficient.*

Innovative practice

→ SOURCING SUSTAINABLE ALTERNATIVES

Hotels taking action to source responsible alternatives to produce/products associated with animal cruelty and biodiversity loss is a common practice.

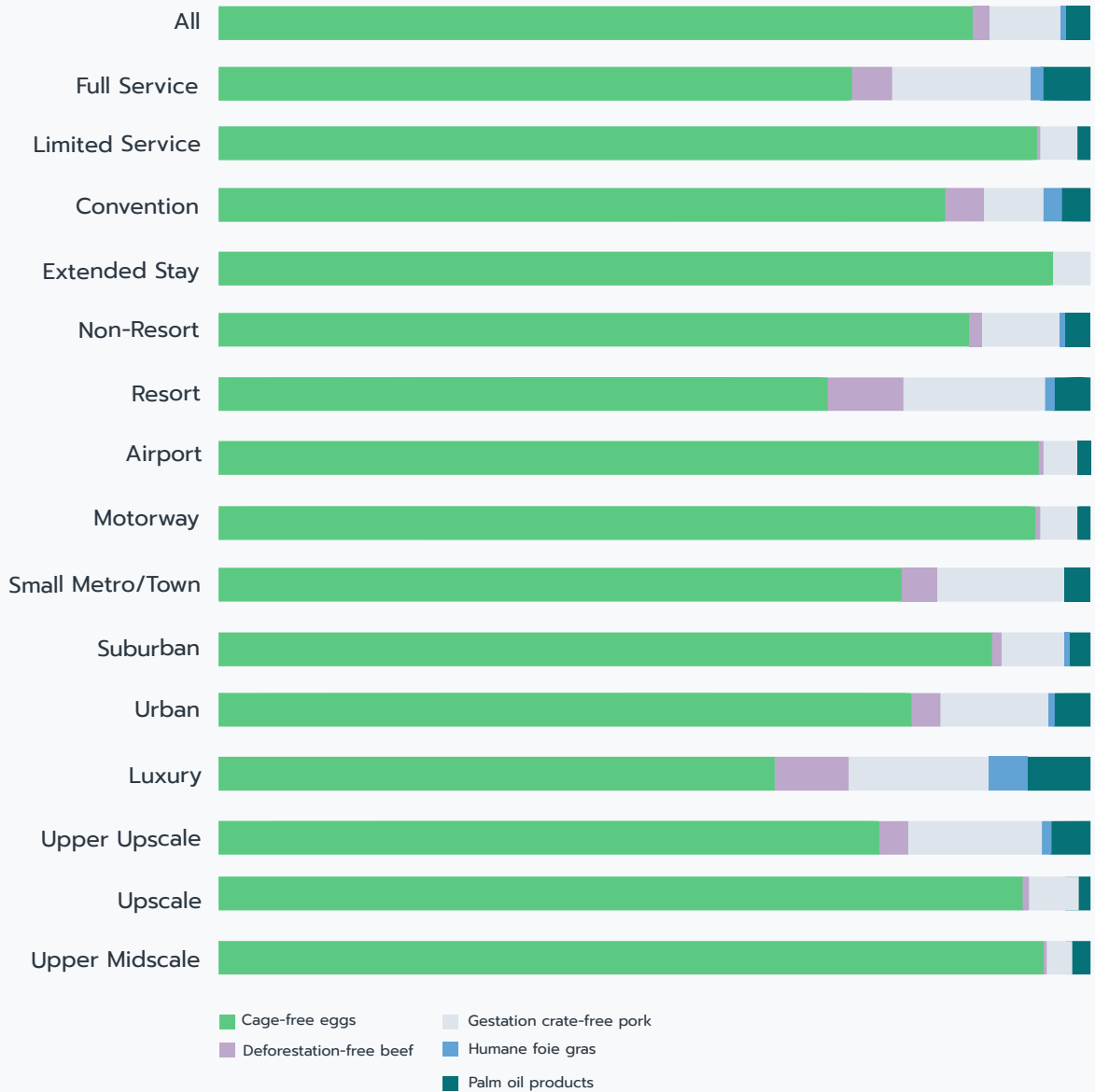
- Nearly all hotels (99.1%) are sourcing for at least one type of produce/product responsibly.
- Across the options provided, cage-free eggs were the top sourced responsible product. This is followed by gestation crate-free pork, sustainably certified palm oil products, deforestation-free beef, and humane foie gras.
- 49.5% of hotels source for cage-free eggs.
- 4.8% of hotels source for gestation crate-free pork.
- 1.0% of hotels source for sustainably certified palm oil products.
- 1.0% of hotels source for deforestation-free beef.
- 0.3% of hotels source for humane foie gras.
- Other responsibly sourced products mentioned include seafood and paper.



**Midscale and Economy categories are excluded from the chart as data is insufficient.*

Common practice

Types of Sustainably Sourced Products



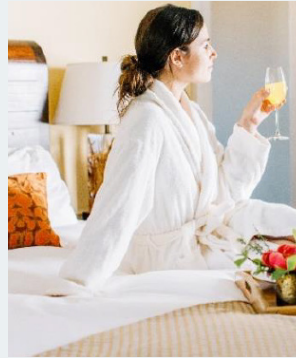
**Midscale and Economy categories are excluded from the chart as data is insufficient.*

***The bars do not add up to 100% because multiple products can be sourced.*



*Cavallo Point Lodge,
San Francisco*

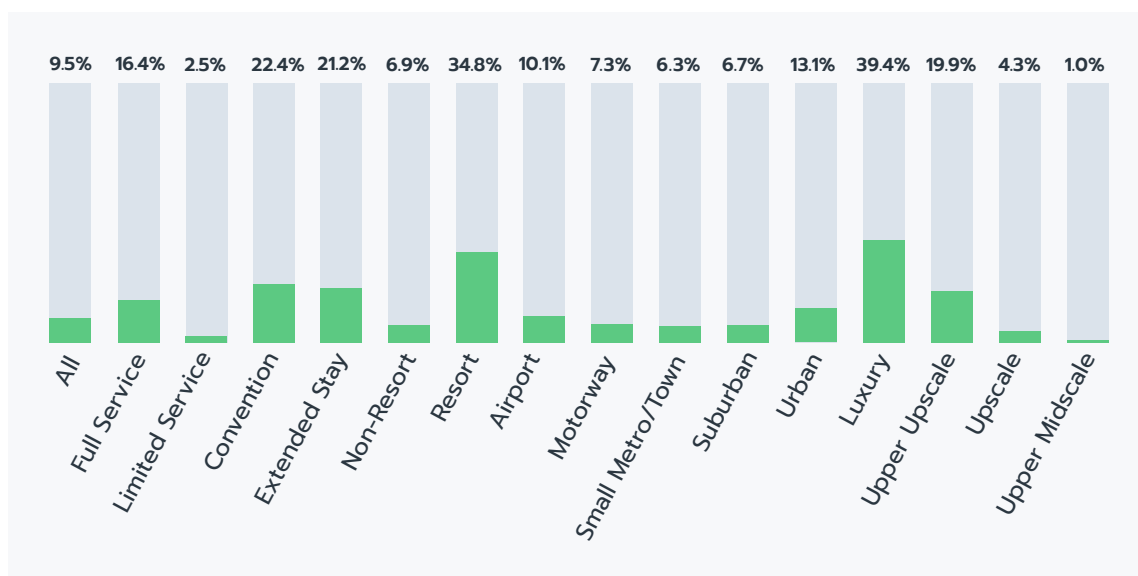
All guest rooms use organics linens, towels, and bathrobes derived from sustainable resources and responsible manufacturing practices. The hotel is also built with recycled materials or made from rapidly renewable resources, like bamboo for the finishing and shredded blue jeans for wall insulation.



→ SUSTAINABLE SEAFOOD

Hotels purchasing at least half of their seafood (by spend) on certified sustainable products is an innovative practice.

- 9.5% of hotels make at least half of their seafood purchases from certified sustainable sources (by spend).
- Full service hotels are more than six times more likely (16.4%) to implement this practice compared to limited service hotels (2.5%).
- Prevalence of this practice varies largely across property types, with resorts having the highest prevalence rate (34.8%) and non-resorts having the lowest (6.9%).
- Hotels across different location types have similar uptake rates, which range between 6.3% and 13.1%.
- Luxury has the highest uptake rate of 39.4% and it decreases significantly down the STR chain scale.



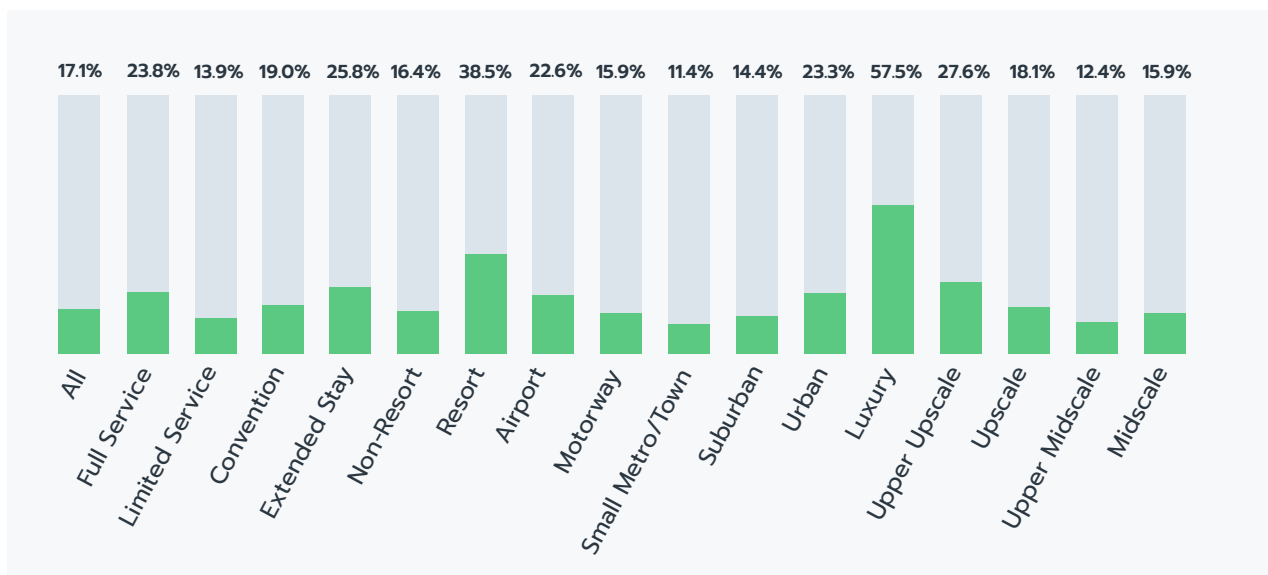
**Midscale and Economy categories are excluded from the chart as data is insufficient.*

Innovative practice

→ LOCAL FOOD & BEVERAGE

Hotels purchasing at least half of their food and beverage spend on items from local providers is an innovative practice.

- 17.1% of all hotels purchase at least 50% of their food and beverages from local providers (by spend).
- Full service hotels (23.8%) are more likely to implement this practice compared to limited service hotels (13.9%).
- Prevalence rates are similar across most property types which range between 16.4% and 25.8%, except for resorts, which have a 38.5% prevalence rate.
- Across all location types, this is an innovative practice with uptake rates from 11.4% to 23.3%.
- Likelihood of this practice generally increases with the tiers of the STR chain scale, peaking at luxury hotels with a likelihood of 57.5%.



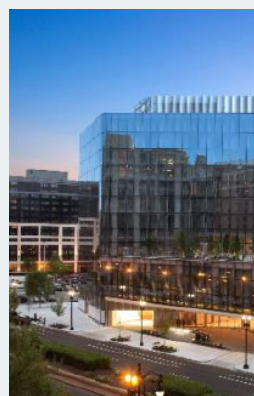
**Economy category is excluded from the chart as data is insufficient.*

Innovative practice



Conrad Washington DC, Washington DC

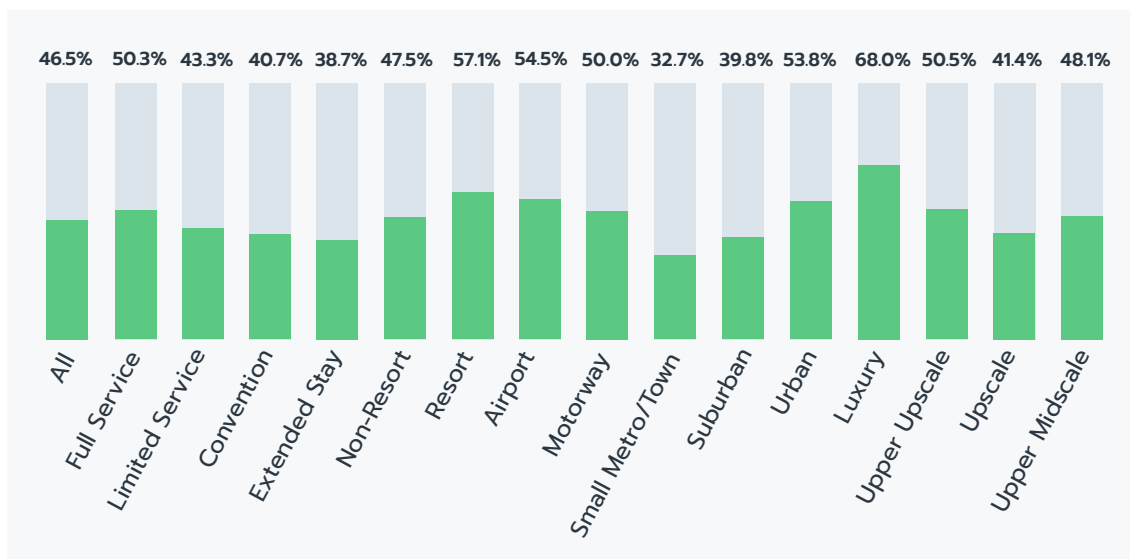
This hotel works with local vendors, including a female-owned and operated farm to source the ingredients in its restaurants. All vendors are carefully chosen for their sustainable practices.



→ FAIR TRADE FOOD & BEVERAGE

Hotels purchasing at least half of their food and beverage spend on fair trade items is an emerging practice.

- 46.5% of all hotels purchase at least half of their food and beverage items from fair trade sources (by spend).
- Both full service and limited service hotels have prevalence rates near the overall average, at 50.3% and 43.3% respectively.
- This is an emerging practice for most property types, except for resorts (57.1%), where it is an established practice.
- Across location types, hotels at airports have the highest prevalence rate (54.5%), followed closely by urban (53.8%) and motorway hotels (50.0%).
- Luxury hotels (68.0%) are the most likely to purchase fair trade food and beverage items, while the remaining segments have uptake rates between 41.4% and 50.5%.



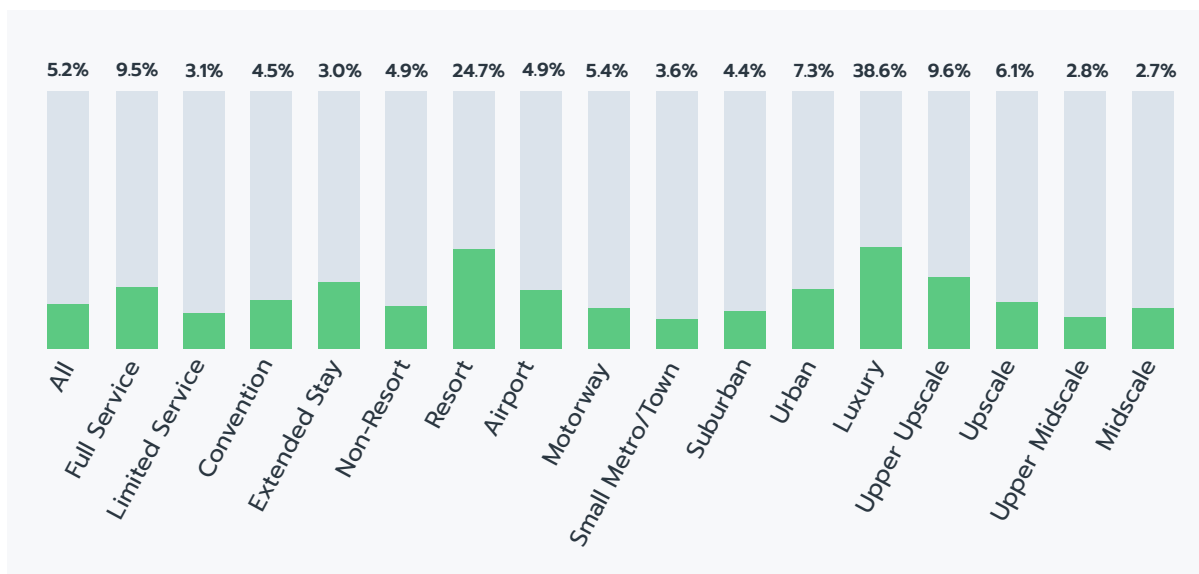
**Midscale and Economy categories are excluded from the chart as data is insufficient.*

Emerging practice

→ ORGANIC FOOD & BEVERAGE

Hotels purchasing at least half of food and beverage spend on organic food and beverage items is an innovative practice.

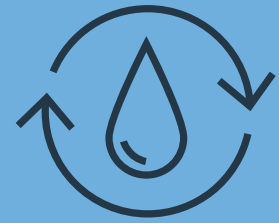
- 5.2% of hotels purchase at least half of their food and beverages from organic sources (by spend).
- The prevalence rate for full service hotels (9.5%) is three times higher compared to limited service hotels (3.1%).
- Even though this is an innovative practice across all property types, resorts have a significantly higher uptake rate of 24.7% compared to the rest, which are between 3.0% and 4.9%.
- Hotels across all location types are almost equally likely to implement this practice.
- Luxury hotels have the highest uptake rate of 38.6%, while the other STR chain scale segments have uptake rates of less than 10%.



**Economy category is excluded from the chart as data is insufficient.*

Innovative practice

WATER CONSERVATION



→ **As the threat of water scarcity intensifies due to climate change, it becomes increasingly important to conserve water and minimize the water footprint of the hospitality industry.** Six best practices for water conservation were assessed. Out of the six, there are two common practices. Almost all hotels have been taking action to implement water efficiency measures in the last three years. More than four in five hotels are using native or drought-tolerant plants for landscaping to reduce the need for water-intensive irrigation. The next three most prevalent initiatives are emerging practices such as tracking water consumption (slightly less than half of all hotels), having a water reduction plan (two in five hotels), and installing water-efficient fixtures (at least one-quarter of all hotels). A practice that is still not widely adopted is installing water sub-meters to facilitate water consumption tracking and savings.

→ KEY FINDINGS

- **Common practices**

- Nearly all hotels (99.3%) have implemented water efficiency measures in the past three years.
- 83.1% use native or drought-tolerant plants for landscaping to reduce irrigation needs.

- **Emerging practices**

- Slightly less than half (47.6%) of all hotels track water consumption, mostly on a quarterly basis.
- 41.7% hotels have plans and initiatives to reduce water use.
- At least one-quarter of all hotels install water-efficient fixtures such as high-efficiency faucets (25.0%), high-efficiency showerheads (32.7%), and low-flow toilets (33.4%).

- **Innovative practices**

- One-fifth of hotels (20.2%) use sub-meters to track their water consumption.

→ COMPARING WATER PERFORMANCE ACROSS THE COUNTRY

The median hotel water usage per occupied room for each metropolitan area was assessed to compare the water performance across the country. The efficiency gap ratio, calculated by dividing the upper quartile intensity by the lower quartile intensity for each metropolitan area, was assessed to analyze the water performance within each metropolitan area.

The water usage intensity was calculated using hotel water consumption data in 2021, collected for the Cornell Hotel Sustainability Benchmark (CHSB) 2023. CHSB is an industry-led global data collection and benchmarking initiative, with data on energy, water, and carbon emissions from over 25,000 hotels globally.

For a further breakdown of the water intensity by all of the remaining metropolitan areas and other environmental performance metrics, please refer to the latest CHSB report and public tool available on the [Greenview website](#).

Water Usage Intensity

The latest Cornell Hotel Sustainability Benchmark (CHSB) found that the median water consumption per occupied room among all hotels in the U.S. is 114.3 gal.

- Among full service non-resorts, the three best-performing metropolitan areas with the lowest water usage per occupied room are Salt Lake City, UT (98.5 gal), Durham, NC (103.4 gal), and Seattle, WA (109.9 gal).
- Among limited service non-resorts, the three best-performing metropolitan areas with the lowest water usage per occupied room are Baton Rouge, LA (73.2 gal), Gulfport-Biloxi, MS (74.9 gal), and Augusta, GA (78.9 gal).
- Between the two service types, limited service hotels tend to have a lower median for water usage intensity than full service hotels.

Top 30 Metro Areas by Median for Full Service Non-Resort Hotel Water Usage Per Occupied Room (gal)

Rank	Metro Area	Lower Quartile	Median	Upper Quartile
1	Salt Lake City, UT	59.5	98.5	197.7
2	Durham, NC	86.9	103.4	114.8
3	Seattle, WA	91.0	109.9	138.2
4	San José, CA	93.2	111.5	150.5
5	Boston, MA	91.6	111.8	161.5
6	Milwaukee, WI	101.1	116.7	156.6
7	Birmingham, AL	91.1	119.1	193.5
8	Savannah, GA	92.3	121.3	169.7
9	Raleigh, NC	91.8	123.7	162.6
10	Columbia, SC	97.0	125.3	220.8
11	New Orleans, LA	92.1	126.0	194.0
12	Asheville, NC	102.6	126.5	144.6
13	San Antonio, TX	94.8	127.6	204.3
14	Nashville, TN	106.3	127.6	184.9
15	Hartford, CT	105.2	128.5	172.7
16	Chicago, IL	106.3	133.9	196.0
17	New York, NY	102.1	134.5	186.9
18	Los Angeles, CA	106.2	135.6	179.3
19	Charleston, SC	88.5	136.0	169.2
20	Baton Rouge, LA	117.6	136.5	204.1
21	Oklahoma City, OK	113.7	138.3	170.1
22	San Bernardino, CA	121.4	139.0	232.0
23	Greenville, SC	110.2	139.7	207.8
24	Cleveland, OH	114.9	140.0	208.2
25	San Francisco, CA	97.0	140.7	180.9
26	Baltimore, MD	94.1	141.1	194.5
27	Washington DC	109.5	142.4	179.7
28	Columbus, OH	110.2	142.5	180.9
29	Denver, CO	111.2	142.6	174.3
30	Atlanta, GA	109.6	143.1	187.9

- **Lower Quartile** – the 25-percent marker within the data set. Twenty-five percent of the properties within the geography and segment were at or below this figure.
- **Median** – the middle value found within the geography and segment grouping.
- **Upper Quartile** – the 75-percent marker within the data set. Seventy-five percent of the properties within the geography and segment were at or below this figure.

Top 30 Metro Areas by Median for Limited Service Non-Resort Hotel Water Usage Per Occupied Room (gal)

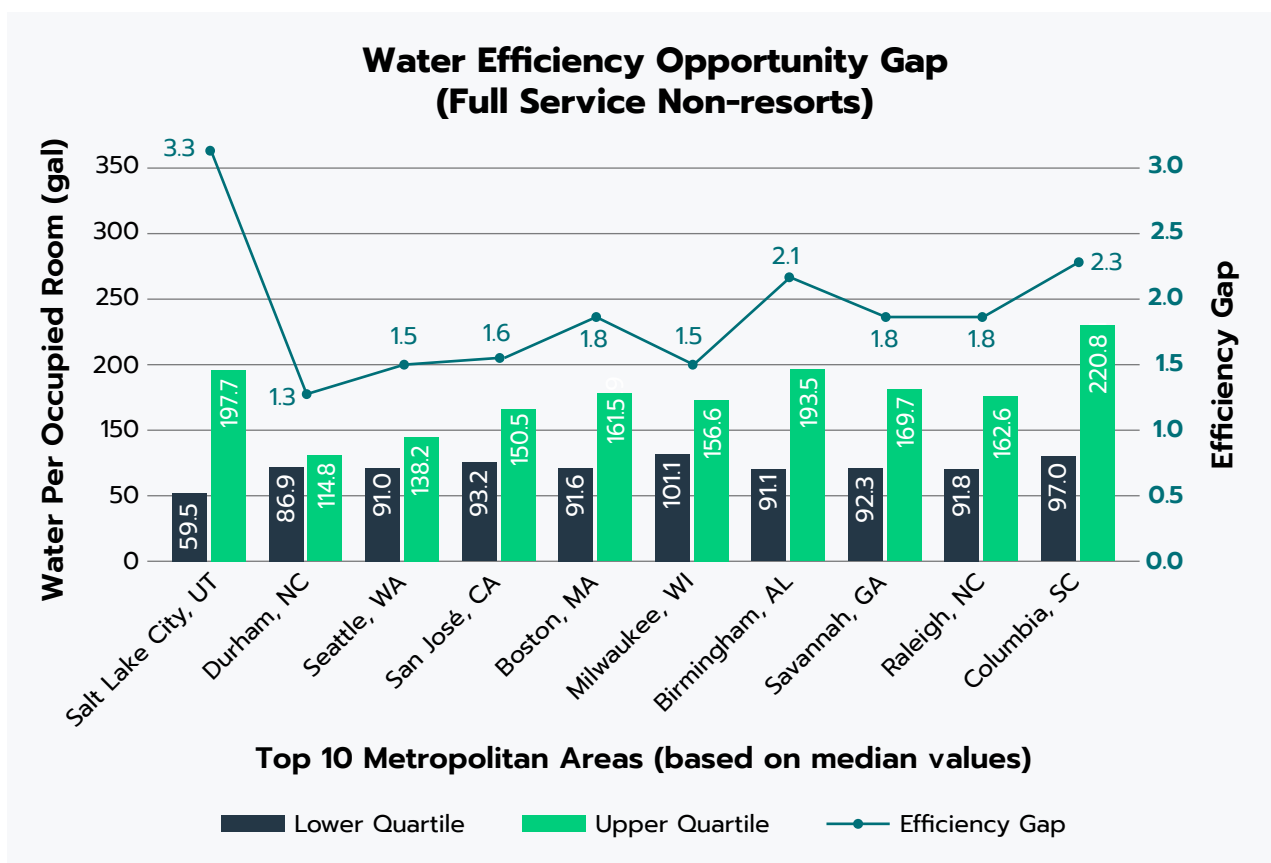
Rank	Metro Area	Lower Quartile	Median	Upper Quartile
1	Baton Rouge, LA	66.2	73.2	108.5
2	Gulfport-Biloxi, MS	69.8	74.9	128.6
3	Augusta, GA	62.6	78.9	103.4
4	Waco, TX	49.4	80.5	109.5
5	Charleston, WV	32.7	80.7	184.0
6	Worcester, MA	54.1	84.7	145.6
7	Longview, TX	56.6	84.9	107.1
8	Ogden, UT	48.8	85.3	148.7
9	Wilmington, NC	74.9	85.4	127.6
10	Rochester, NY	75.3	85.9	107.9
11	Palm Bay, FL	77.9	86.2	110.1
12	Dayton, OH	66.1	86.7	116.6
13	Charlottesville, VA	60.0	86.9	109.5
14	Durham, NC	75.1	87.2	110.0
15	Allentown, PA	75.3	87.4	101.5
16	Lansing, MI	74.4	87.8	102.6
17	Lancaster, PA	64.2	88.6	127.5
18	Davenport, IA (Quad Cities)	74.9	89.0	106.7
19	Milwaukee, WI	67.2	89.3	139.4
20	Kennewick, WA	79.1	89.6	177.3
21	Fargo, ND	80.7	89.7	98.8
22	Jackson, MS	65.5	90.8	126.4
23	Chattanooga, TN	69.4	90.9	133.8
24	Corpus Christi, TX	73.5	92.5	165.5
25	Montgomery, AL	60.8	93.4	141.6
26	Syracuse, NY	76.8	93.4	112.3
27	Monroe, LA	89.2	93.8	110.7
28	Akron, OH	79.1	94.0	120.2
29	Tempe, TX	60.4	95.1	109.3
30	Evansville, IN-KY	86.5	95.6	101.5

- **Lower Quartile** – the 25-percent marker within the data set. Twenty-five percent of the properties within the geography and segment were at or below this figure.
- **Median** – the middle value found within the geography and segment grouping.
- **Upper Quartile** – the 75-percent marker within the data set. Seventy-five percent of the properties within the geography and segment were at or below this figure.

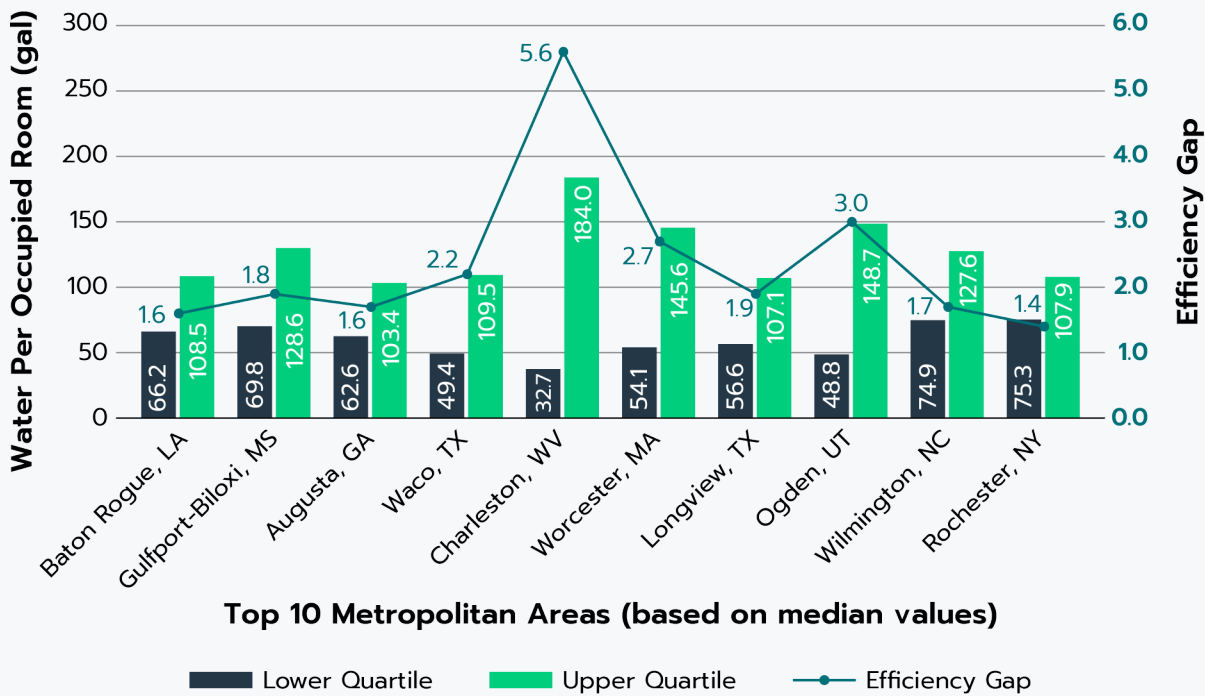
→ WATER EFFICIENCY GAP

The difference in water consumption per occupied room between hotels in the upper quartile (performers with more room for improvement) compared to the lower quartile (better performers) is high within most metropolitan areas in the U.S. This is indicated by the large efficiency gap ratios, calculated by dividing the upper quartile intensity with the lower quartile intensity for each metropolitan area.

- For both full and limited service non-resorts, at least eight out of the top ten metropolitan areas have a water efficiency gap of more than 1.5. It shows that the best-performing hotels within each metropolitan area are doing at least 1.5 times better than their peers.
- The high water efficiency gap ratio across most metropolitan areas indicates opportunities for hotels within the upper quartile to reduce their water consumption.



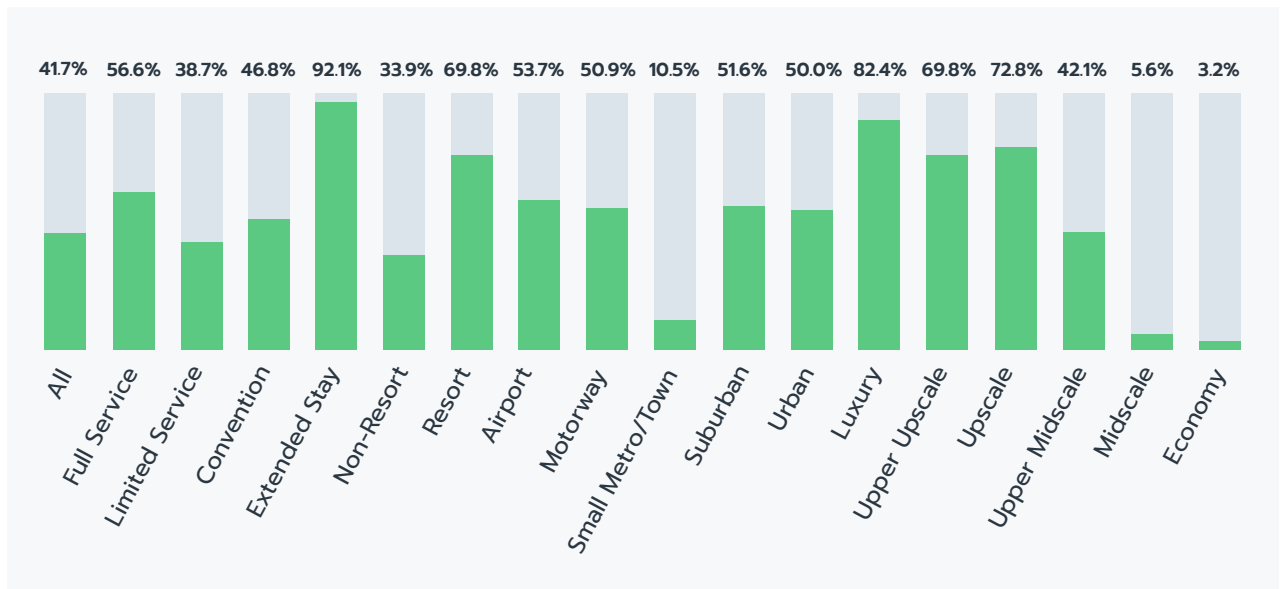
Water Efficiency Opportunity Gap (Limited Service Non-Resorts)



→ WATER REDUCTION PLAN

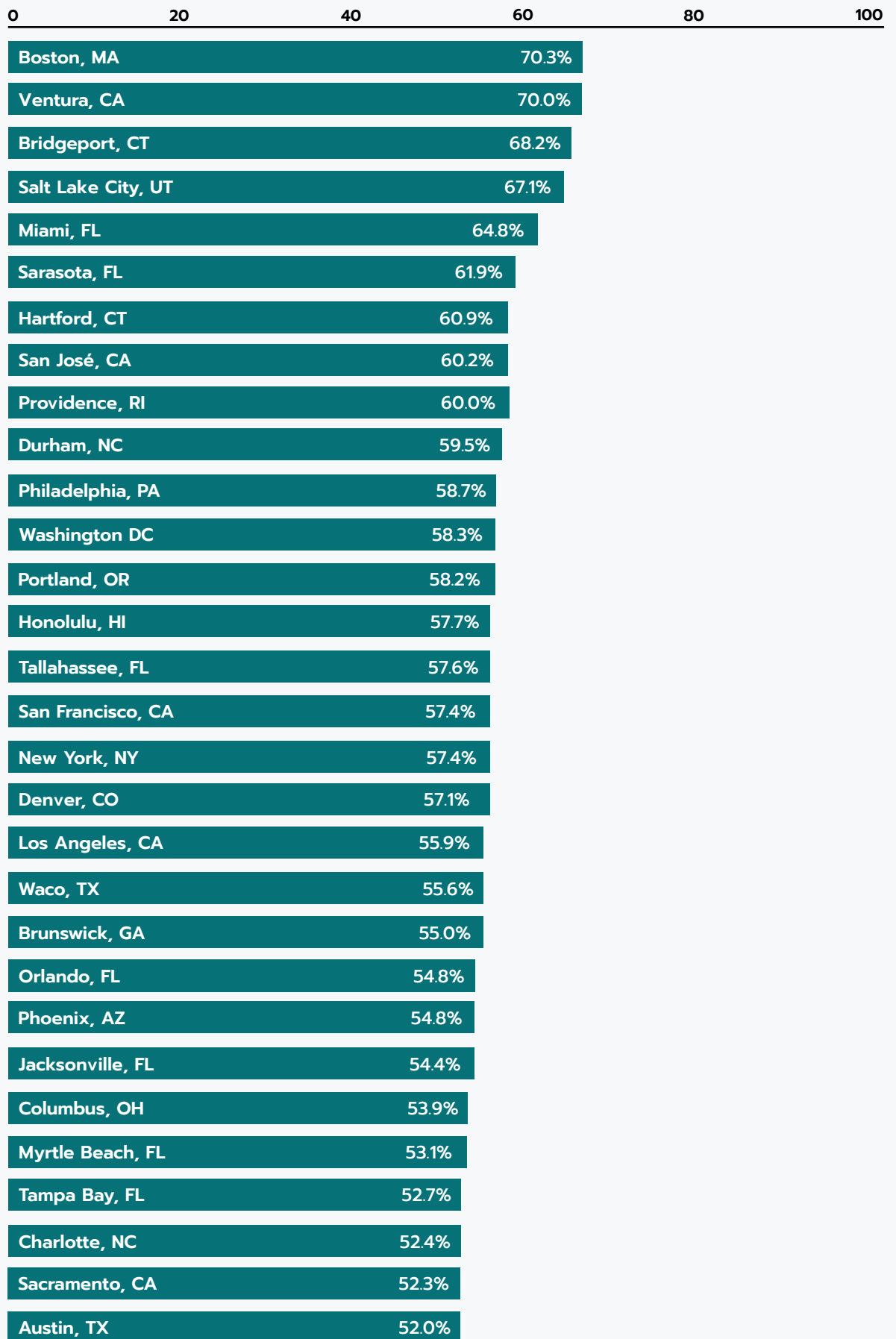
Hotels planning and implementing initiatives to reduce water use is an emerging practice.

- At least two in five (41.7%) hotels have plans and initiatives to reduce water use.
- Slightly more than half (56.6%) of full service hotels adopt this practice, making it an established practice. It is an emerging practice for limited service hotels where the prevalence is lower at 38.7%.
- Virtually all extended stays (92.1%) have a water reduction plan, making it a common practice among this property type. It is an established practice among resorts (69.8%) and an emerging practice for convention hotels (46.8%) and non-resorts (33.9%).
- This is an established practice for most location types, with at least half of the hotels having a water reduction plan (50.0% to 53.7%). Small metro and town areas are the exception, where it is an innovative practice with the lowest prevalence of 10.5%.
- Across the STR chain scale segments, higher-tier hotels are more likely to have a water reduction plan. More than four in five luxury hotels (82.4%) adopt this practice while only 3.2% of economy hotels do so.
- The top three metropolitan areas that plan and implement initiatives to reduce water use are Boston, MA (70.3%), Ventura, CA (70.0%), and Bridgeport, CT (68.2%).



Emerging practice

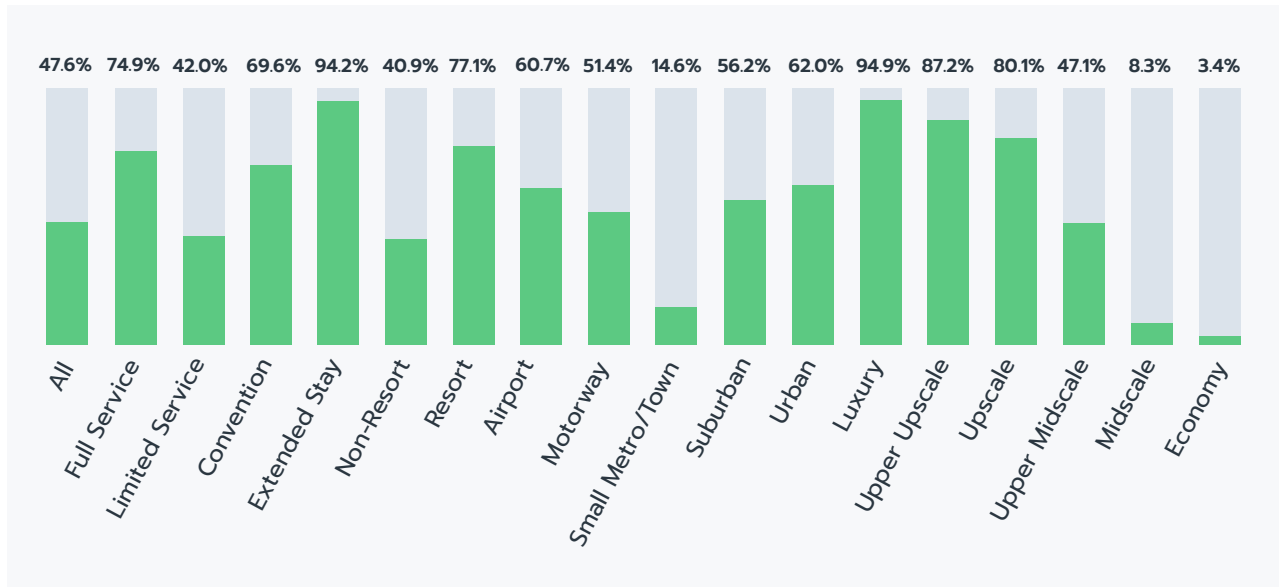
Top 30 Metropolitan Areas



→ WATER TRACKING

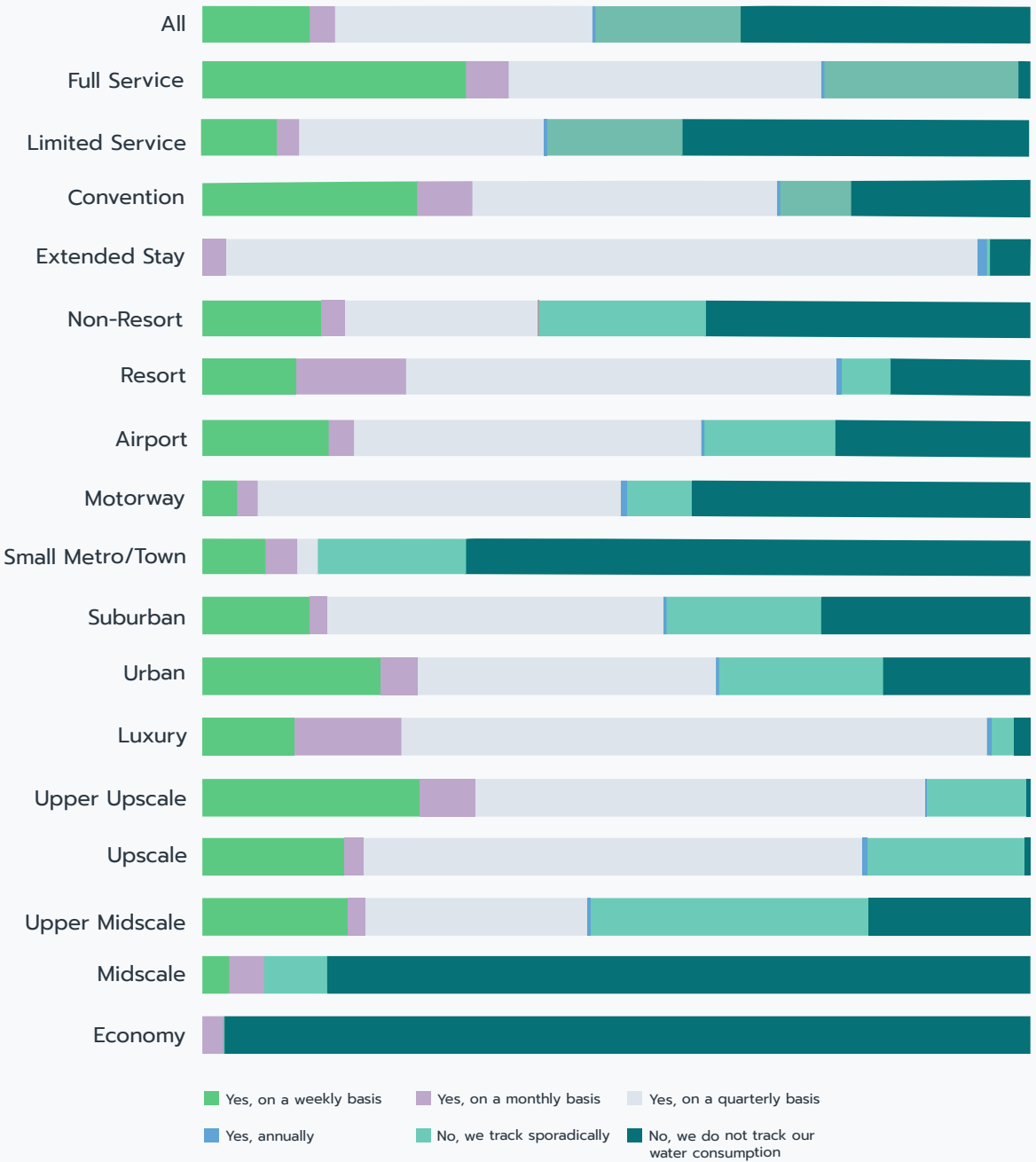
Hotels tracking their water consumption is an emerging practice.

- Slightly less than half (47.6%) of all hotels track water consumption, mostly on a quarterly basis.
- Full service hotels (74.9%) are over 30% more likely to track water consumption than limited service hotels (42.0%).
- Tracking water consumption is a common practice for extended stays (94.2%) and resorts (77.1%). This is an emerging practice for non-resorts, where the prevalence is lower at 40.9%.
- By location, this is mostly an established practice, with the highest uptake rates in urban areas (62.0%). Small metro and town areas are the only exception, where it is an innovative practice with the lowest prevalence of 14.6%.
- Higher tiers of the STR scale chain segments are associated with a higher prevalence of tracking water consumption. Virtually all luxury hotels (94.9%) adopt this practice, while less than 10% of midscale hotels (8.3%) and economy hotels (3.4%) do the same.
- Among hotels that track water consumption, most do so on a quarterly basis (30.5%), followed by a weekly (13.7%) and monthly basis (3.1%). Only 0.3% of all hotels track water consumption annually.



Emerging practice

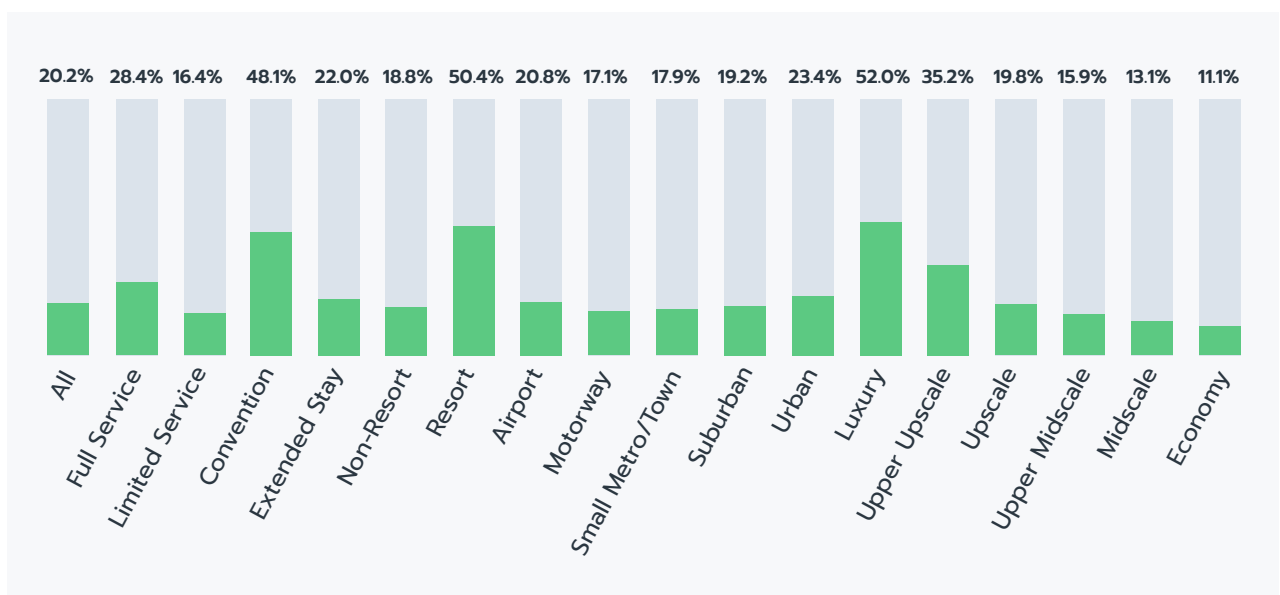
Frequency of Water Tracking



→ WATER SUB-METERING

Hotels using sub-meters to track their water consumption is an innovative practice.

- One-fifth of hotels (20.2%) use sub-meters to track their water consumption.
- Compared to the national average, the prevalence of this practice is higher for full service hotels (28.4%) and lower for limited service hotels (16.4%).
- Resorts (50.4%) and convention hotels (48.1%) are the property types that are more likely to install water sub-meters. The prevalence of this practice among other property types is close to the country-wide average.
- This is an innovative practice for all location types.
- Across the STR chain scale segments, higher-tier hotels are associated with a higher uptake rate of water sub-meters. Slightly more than half of the luxury hotels (52.0%) implement this, which is almost five times higher than economy hotels (11.1%).

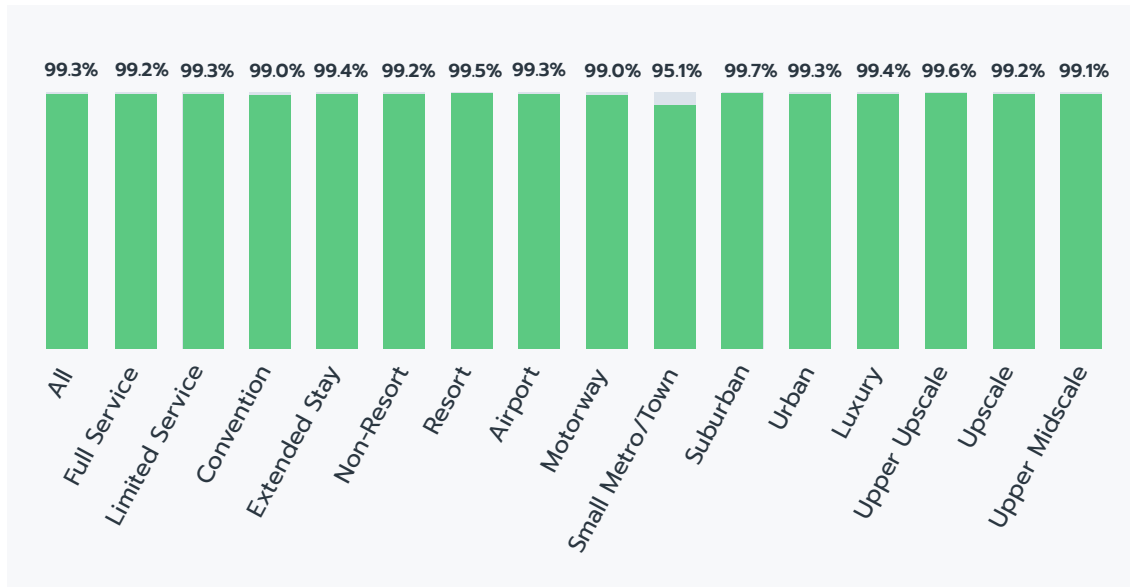


Innovative practice

→ WATER EFFICIENCY MEASURES

Hotels implementing water efficiency measures is a common practice.

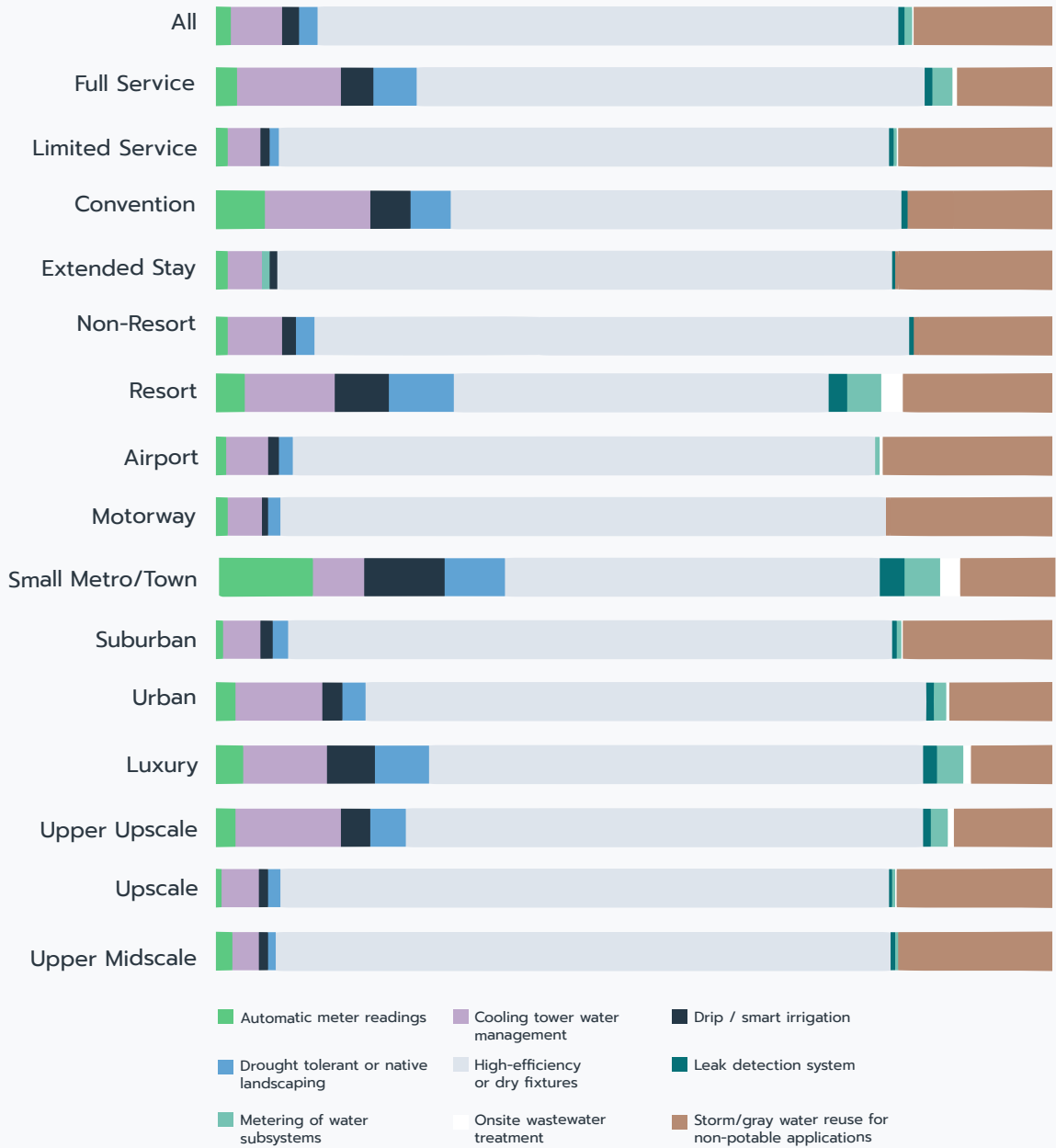
- Nearly all hotels (99.3%) have implemented water efficiency measures in the past three years.
- The most common water efficiency measures that hotels implement are high-efficiency or dry fixtures (90.4%), storm or gray water reuse for non-potable applications (24.0%), and cooling tower water management (8.1%).



**Midscale and Economy categories are excluded from the chart as data is insufficient.*

Common practice

Water Efficiency Measures



*Midscale and Economy categories are excluded from the chart as data is insufficient.

**The bars do not add up to 100% because multiple measures can be implemented.



Water Efficiency Regulations

The U.S. Environmental Protection Agency (EPA) launched the WaterSense [H2Otel Challenge](#) to help hotels learn how to reduce water use, minimize operating costs, and meet the sustainable expectations of today's travelers. More than 860 hotels have signed up for the challenge, where they receive free recognition, outreach, and technical tools that will help them save water, energy, and money.

On top of this, individual cities and states implemented their own initiatives and rebates to encourage businesses to improve water efficiency. Some examples include:

[Austin, Texas \(TX\):](#)

- Voluntary Reclaimed Water Connection Pilot Rebate: Up to \$100,000 is offered for voluntarily connecting to and using reclaimed water from Austin Water's reclaimed water system.
- Commercial Kitchen Rebate: Offers \$40 to \$5,000 per item for water-efficient kitchen equipment.
- Rainwater Harvesting Rebate: Offers up to \$5,000 per site to purchase equipment for capturing rainwater.

[Portland, Oregon \(OR\):](#)

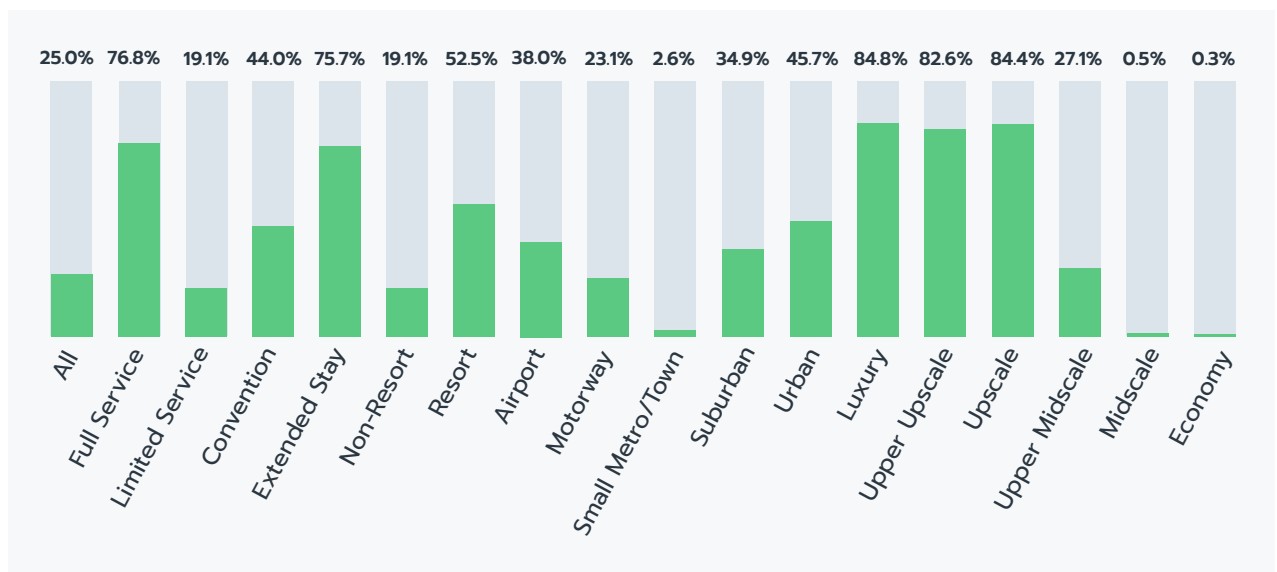
- Irrigation Rebate: The Portland Water Bureau is offering rebates on water saving multi-stream rotator nozzles and WaterSense-labeled irrigation controllers. With proper installation, programming, and maintenance, homeowners and businesses can incorporate these upgrades to save thousands of gallons of water.
- Toilet Rebate: Up to \$2,500 of rebates are offered for replacing toilets and urinals with a new high-efficiency model that is approved by the EPA. In addition, the old toilets must be recycled at specified locations in the state of Oregon. The business must have receipts for both the recycling of their old model and the purchase of the new model.
- Custom rebate for commercial improvement projects: Rebates are also available for water efficiency improvement projects for small businesses and non-profits. Incentive awards pay 50 percent of the approved costs of the project, up to a maximum of \$5,000 per project.

→ HIGH-EFFICIENCY FIXTURES

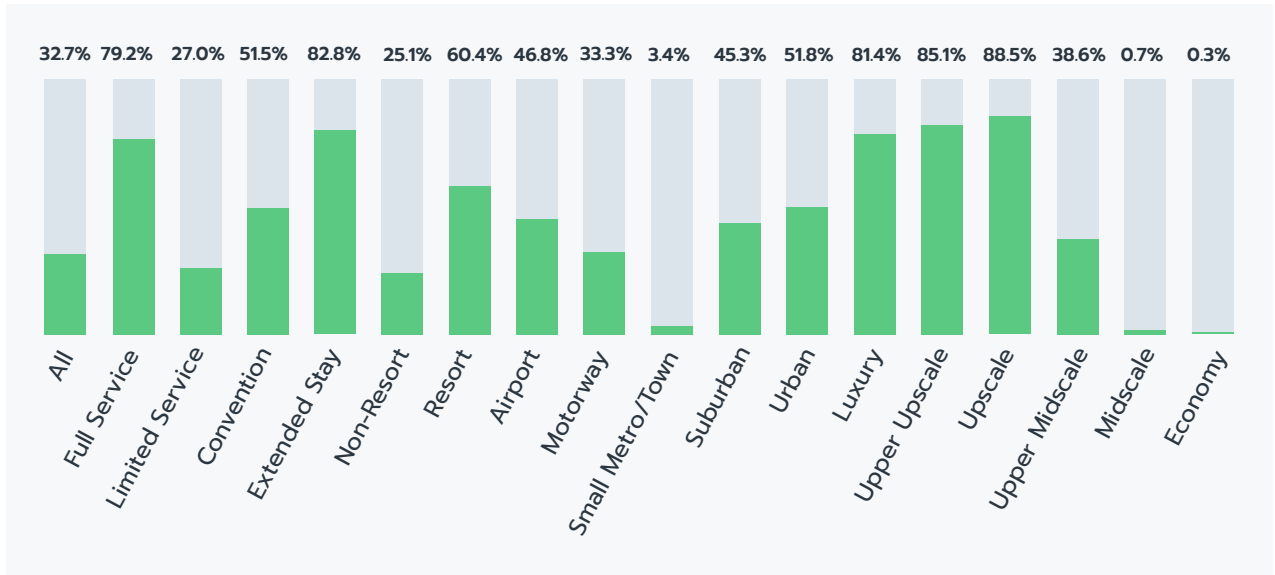
Hotels installing water-efficient fixtures (such as high-efficiency faucets, shower heads, and toilets) in at least 90% of the property is an emerging practice.

- At least one-quarter of all hotels install water-efficient fixtures such as high-efficiency faucets (25.0%), high-efficiency showerheads (32.7%), and low-flow toilets (33.4%).
- This practice is about three times more prevalent at full service hotels than at limited service hotels for each of the water-efficient fixtures.
- Regardless of service, property, and location type, as well as STR chain scale segments, low-flow toilets tend to be the most prevalent, followed by high-efficiency showerheads and high-efficiency faucets.
- Extended stay is the only property type where installing water-efficient fixtures is a common practice. It is least prevalent at non-resorts, where it is either an emerging or innovative practice.
- This is an emerging practice for most location types, except for small metro and town areas, where it is an innovative practice.
- This is a common practice among higher STR chain scale segments (upscale, upper upscale, and luxury hotels) where the prevalence rates for all three types of water-efficient features are consistently above 80%. It is an emerging practice for upper midscale hotels and an innovative practice for midscale hotels and economy hotels.

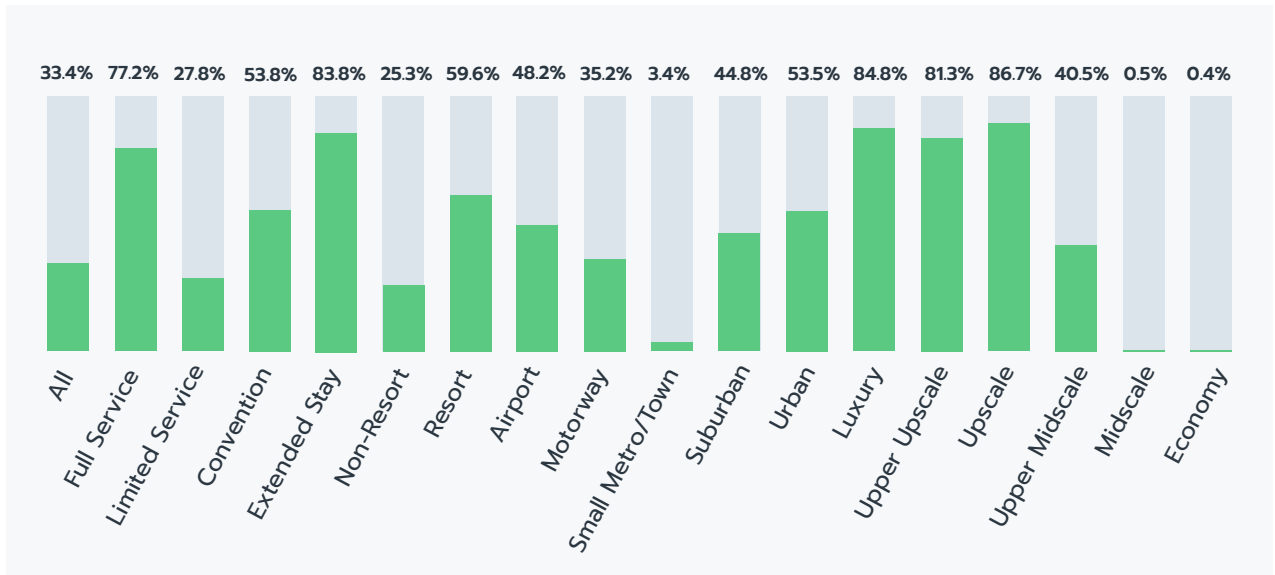
> 90% High-Efficiency Faucets



> 90% High-Efficiency Showerheads



> 90% Low-Flow Toilets



Emerging practice



Gaylord Palms Resort and Convention Center, Kissimmee, Florida

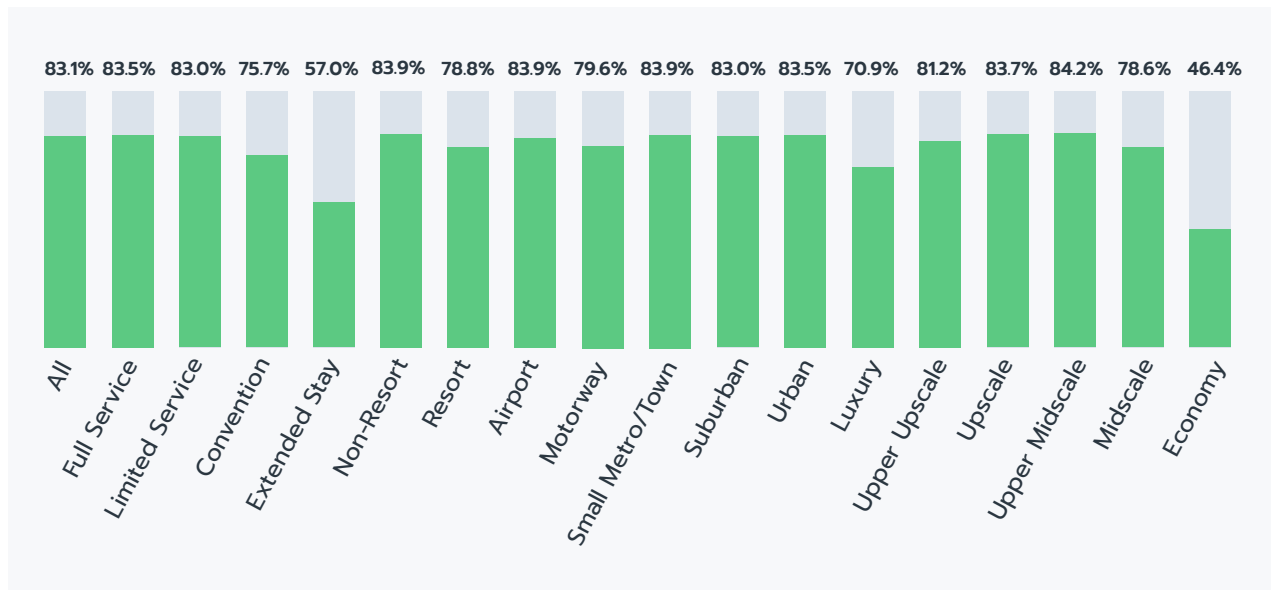
This resort hotel, based in Central Florida, faces a high baseline water stress. To mitigate any water risk, it installs and utilizes low-flow showerheads, faucets, and aerators. The hotel also features drought-resistant plants across the exterior of the property and utilizes an irrigation system that uses water reuse and reclamation.



→ NATIVE OR DROUGHT-TOLERANT PLANTS

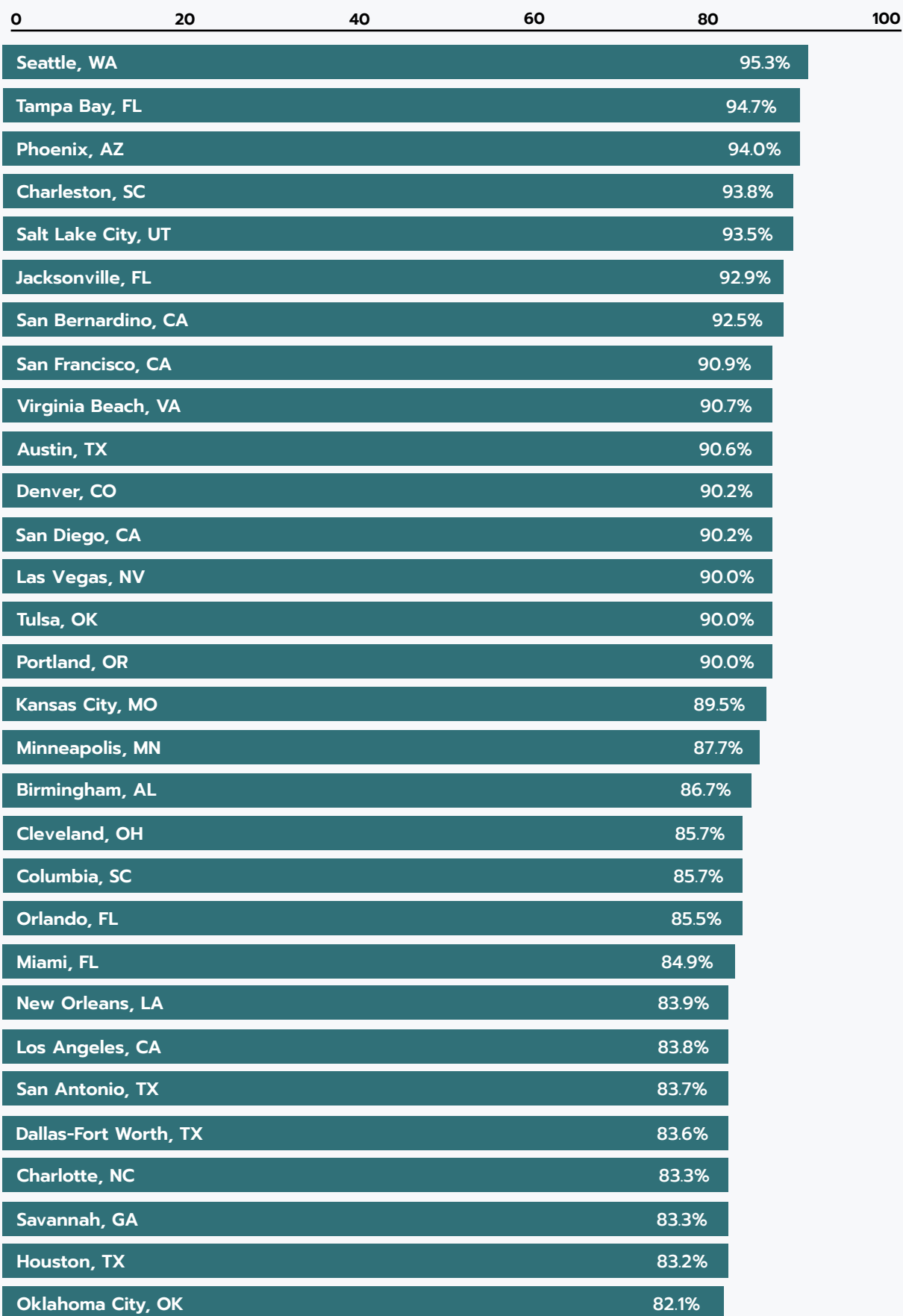
Hotels using native or drought-tolerant plants for landscaping to reduce irrigation needs is a common practice.

- More than four in five hotels (83.1%) use native or drought-tolerant plants for landscaping to reduce irrigation needs.
- The prevalence rates are consistently higher than 70% for most service, property, and location types, as well as STR chain scale segments.
- Extended stays (57.0%) and economy hotels (46.4%) are exceptions, where the prevalence rates are considerably lower than the national average.
- The top three metropolitan areas that use native or drought-tolerant plants are Seattle, WA (95.3%), Tampa Bay, FL (94.7%), and Phoenix, AZ (94.0%).



Common practice

Top 30 Metropolitan Areas



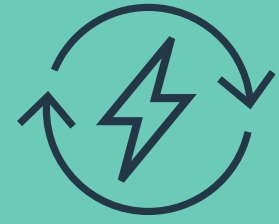


*Park Hyatt Aviara Resort Golf Club & Spa,
California*

This hotel replaced all the tees and roughs on the golf course with warm season grass that is more resilient year-round. This new grass type helps to reduce water consumption by about 20%. It is also less fertilizer and herbicide-intensive. As less equipment is required to maintain this grass type, there is also a reduction in fuel consumption and carbon emissions.



ENERGY MANAGEMENT



→ **Eight best practices for energy management were assessed.** Out of the eight, three are common practices which indicate that most hotels are taking preliminary steps toward better energy management. Nearly all hotels have implemented energy efficiency measures in the last three years and benchmark energy performance against other properties in their company portfolio. It is also common for hotels to have an energy reduction plan. More than three in five hotels implement preventative maintenance plans for energy and water equipment in their building. There are three emerging practices, which include energy consumption tracking, using energy-efficient LED lighting, and enhancing windows to be more reflective or insulating. Using sub-meters to track energy consumption at specific areas of the property is currently an innovative practice that is not as prevalent as other measures.

→ KEY FINDINGS

• Common practices

- Almost all hotels (99.1%) have implemented energy efficiency measures in the past three years.
- Nearly all hotels (95.8%) benchmark their energy performance against peers within the company portfolio (where applicable).
- More than four in five of all hotels (81.8%) plan and implement energy reduction initiatives.

• Established practices

- 64.3% of all hotels implement preventative maintenance plans for building energy and water equipment.

• Emerging practices

- Slightly less than half of all hotels (47.7%) track energy consumption, most of whom do so every quarter.
- 43.9% of all hotels use energy-efficient LED lighting for at least 90% of their interior lighting needs.
- Two in five hotels (40.9%) have at least half of all windows enhanced with reflective and/or insulating characteristics to reduce the need for heating and cooling.

• Innovative practices

- Slightly less than 3% of all hotels use sub-meters to track energy consumption across different areas of their properties.

→ COMPARING ENERGY PERFORMANCE ACROSS THE COUNTRY

The median hotel energy usage per square foot for each metropolitan area was assessed to compare the energy performance across the country. The efficiency gap ratio, calculated by dividing the upper quartile intensity with the lower quartile intensity for each metropolitan area, was assessed to analyze the energy performance within each metropolitan area.

All energy usage intensities were calculated using hotel energy consumption data in 2021, collected for the Cornell Hotel Sustainability Benchmark (CHSB) 2023. CHSB is an industry-led global data collection and benchmarking initiative, with data on energy, water, and carbon emissions from over 25,000 hotels globally.

For a further breakdown of the water intensity by all of the remaining metropolitan areas and other environmental performance metrics, please refer to the latest CHSB report and public tool available on the [Greenview website](#).

→ ENERGY USAGE INTENSITY

The latest Cornell Hotel Sustainability Benchmark (CHSB) found that the median energy usage per square foot among all hotels in the United States is 16.2 kWh.

- Among full service non-resorts, the three best-performing metropolitan areas with the lowest energy usage intensity are Greenville, SC (11.2 kWh per Sq Ft), Birmingham, AL (12.1 kWh per Sq Ft), and Louisville, KY (12.5 kWh per Sq Ft).
- Among limited service non-resorts, the three best-performing metropolitan areas with the lowest energy usage intensity are McAllen, TX (9.1 kWh per Sq Ft), Tyler, TX (9.7 kWh per Sq Ft), and Beaumont-Port Arthur, TX (10.4 kWh per Sq Ft).
- Between the two service types, limited service hotels tend to have a lower median for energy usage intensity than full service hotels.

Top 30 Metro Areas by Median for Full Service Non-Resort Hotel Energy Usage Per Square Foot (kWh)

Rank	Metro Area	Lower Quartile	Median	Upper Quartile
1	Greenville, SC	9.9	11.2	30.6
2	Birmingham, AL	9.0	12.1	25.3
3	Louisville, KY	9.0	12.5	22.2
4	Sacramento, CA	12.3	12.8	18.8
5	Raleigh, NC	8.7	13.1	22.0
6	Lexington, KY	12.3	13.2	15.8
7	Charlotte, NC	9.3	13.5	22.8
8	Providence, RI	8.3	13.6	31.9
9	San José, CA	11.7	13.6	17.8
10	Knoxville, TN	10.1	13.8	16.6
11	Tucson, AZ	10.0	14.0	22.1
12	Virginia Beach, VA	10.5	14.2	26.0
13	Phoenix, AZ	9.8	14.4	22.7
14	Jacksonville, FL	10.5	14.7	20.8
15	St. Louis, MO	12.0	15.2	31.7
16	San Francisco, CA	12.0	15.4	21.7
17	Miami, FL	11.8	15.4	26.1
18	Portland, OR	12.2	15.5	26.0
19	Baton Rouge, LA	9.7	15.6	33.3
20	Los Angeles, CA	11.7	15.9	20.7
21	Philadelphia, PA	11.1	16.1	27.3
22	Orlando, FL	10.4	16.5	26.3
23	Las Vegas, NV	11.7	16.9	31.4
24	San Diego, CA	11.8	16.9	24.8
25	Houston, TX	11.7	17.1	25.9
26	Charleston, SC	10.7	17.1	28.4
27	Memphis, TN	10.3	17.2	23.8
28	Albany, NY	12.5	17.3	28.6
29	Seattle, WA	12.8	17.4	22.5
30	Dallas-Fort Worth, TX	12.0	17.5	25.7

- **Lower Quartile** – the 25-percent marker within the data set. Twenty-five percent of the properties within the geography and segment were at or below this figure.
- **Median** – the middle value found within the geography and segment grouping.
- **Upper Quartile** – the 75-percent marker within the data set. Seventy-five percent of the properties within the geography and segment were at or below this figure.

Top 30 Metro Areas by Median for Limited Service Non-Resort Hotel Energy Usage Per Square Foot (kWh)

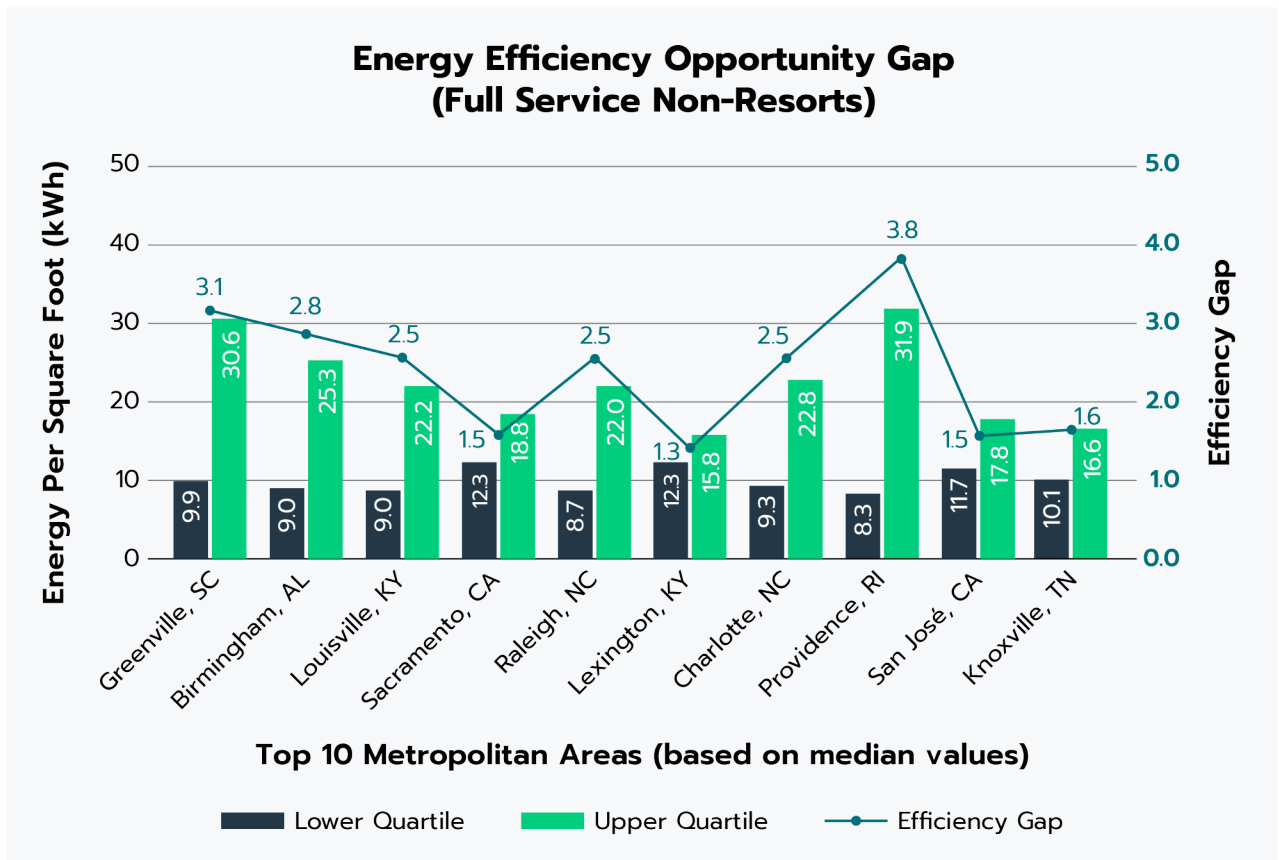
Rank	Metro Area	Lower Quartile	Median	Upper Quartile
1	McAllen, TX	8.0	9.1	21.8
2	Tyler, TX	7.4	9.7	20.5
3	Beaumont-Port Arthur, TX	8.8	10.4	14.4
4	Columbia, MO	9.3	10.5	19.8
5	Columbus, GA	9.2	11.0	14.9
6	Stockton, CA	7.1	11.1	17.0
7	Tulsa, OK	8.8	11.2	14.3
8	Fort Collins, CO	9.5	11.6	15.5
9	Charleston, WV	9.3	11.8	17.9
10	Huntsville, AL	9.8	11.8	19.1
11	Macon, GA	10.8	12.1	15.0
12	Clarksville, TN-KY	9.4	12.1	13.6
13	Bakersfield, CA	8.0	12.2	16.3
14	Augusta, GA	10.6	12.3	16.1
15	Austin, TX	10.4	12.4	17.4
16	Winston-Salem, NC	11.8	12.4	18.3
17	Las Cruces, NM	8.0	12.5	15.8
18	Midland, TX	10.6	12.5	18.4
19	Mobile, AL	10.2	12.6	16.3
20	Duluth, MN -WI	10.0	12.9	27.2
21	Fort Wayne, IN	9.8	12.9	22.0
22	Wichita, KS	8.7	13.0	19.0
23	Memphis, TN	11.4	13.0	21.8
24	Gulfport-Biloxi, MS	9.8	13.1	23.5
25	Reno, NV	10.7	13.2	20.0
26	Wilmington, NC	9.9	13.3	17.6
27	Springfield, MO	11.6	13.4	20.3
28	Sacramento, CA	10.6	13.4	16.1
29	Montgomery, AL	11.0	13.4	17.4
30	Boulder, CO	8.0	13.4	19.4

- **Lower Quartile** – the 25-percent marker within the data set. Twenty-five percent of the properties within the geography and segment were at or below this figure.
- **Median** – the middle value found within the geography and segment grouping.
- **Upper Quartile** – the 75-percent marker within the data set. Seventy-five percent of the properties within the geography and segment were at or below this figure.

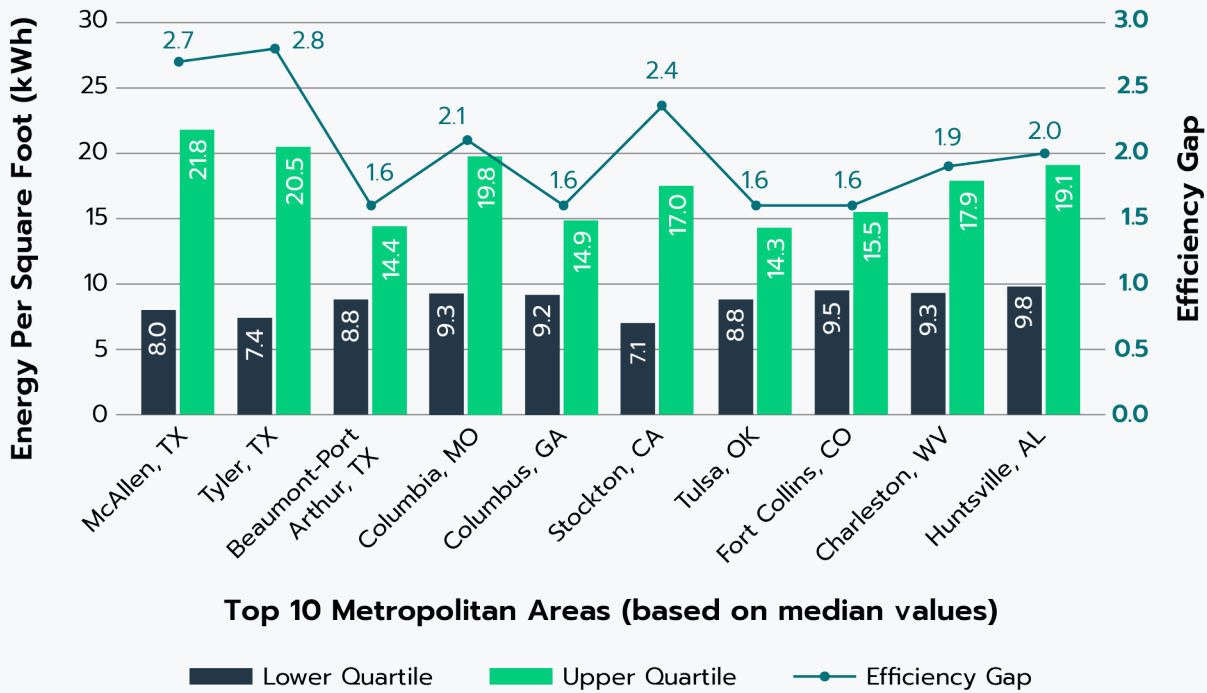
→ ENERGY EFFICIENCY GAP

The difference in energy consumption per square foot between hotels in the upper quartile (performers with more room for improvement) compared to the lower quartile (better performers) is high within most metropolitan areas in the U.S. This is indicated by the large efficiency gap ratios, calculated by dividing the upper quartile intensity with the lower quartile intensity for each metropolitan area.

- For both full and limited service non-resorts, nine out of the top ten metropolitan areas have an energy efficiency gap of more than 1.5. It shows that the best-performing hotels within each metropolitan area are doing at least 1.5 times better than their peers.
- The wide ratio between the upper quartile and the lower quartile across most metropolitan areas indicates opportunities for hotels within the upper quartile to reduce their energy consumption.



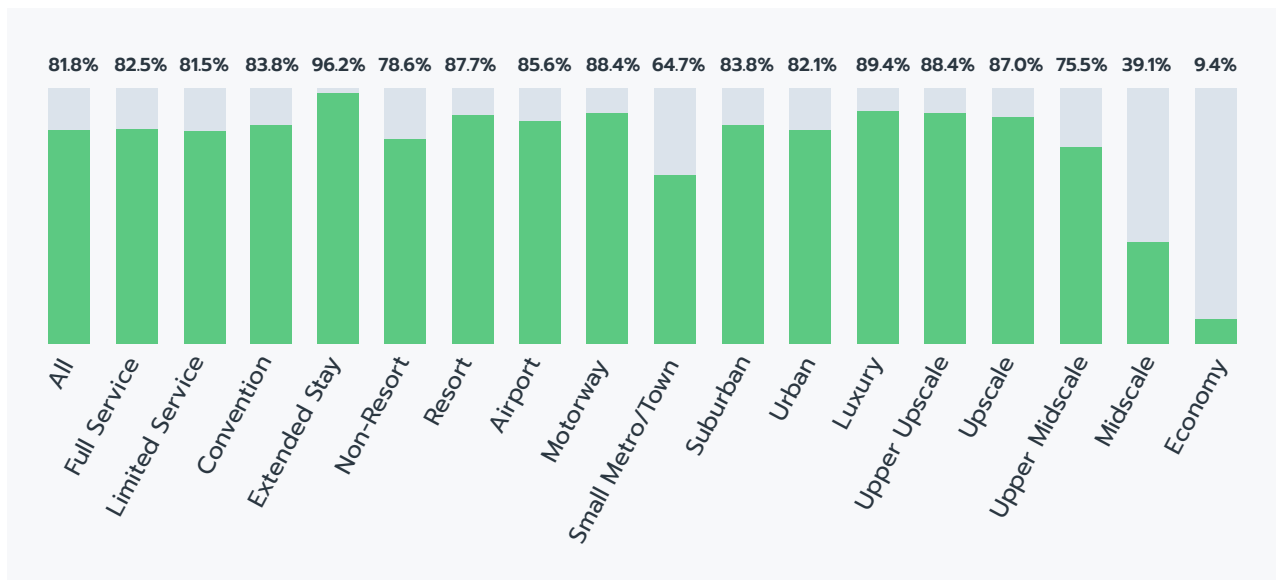
Energy Efficiency Opportunity Gap (Limited Service Non-resorts)



→ ENERGY REDUCTION PLAN

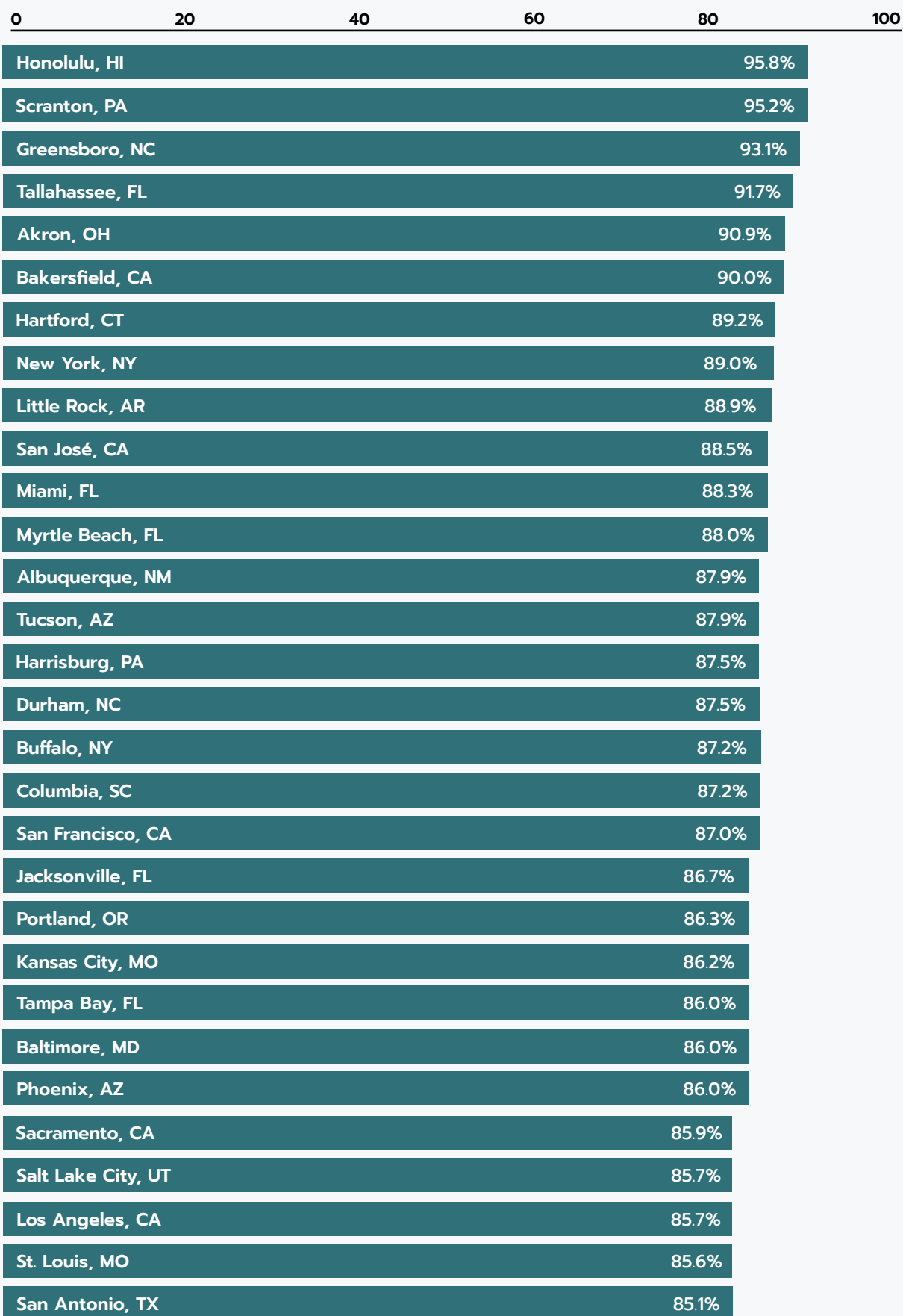
Hotels planning and implementing initiatives to reduce energy use is a common practice.

- More than four in five of all hotels (81.8%) plan and implement energy reduction initiatives.
- This is a common practice for most hotels, regardless of service, property and location type. Small metro and town areas are the only exception, where it is an established practice.
- Across the STR chain scale, higher-tier segments are more likely to have an energy reduction plan. Conversely, midscale hotels (39.1%) and economy hotels (9.4%) are less likely to partake in this practice.
- The top three metropolitan areas that implement this practice are Honolulu, HI (95.8%), Scranton, PA (95.2%), and Greensboro, NC (93.1%).



Common practice

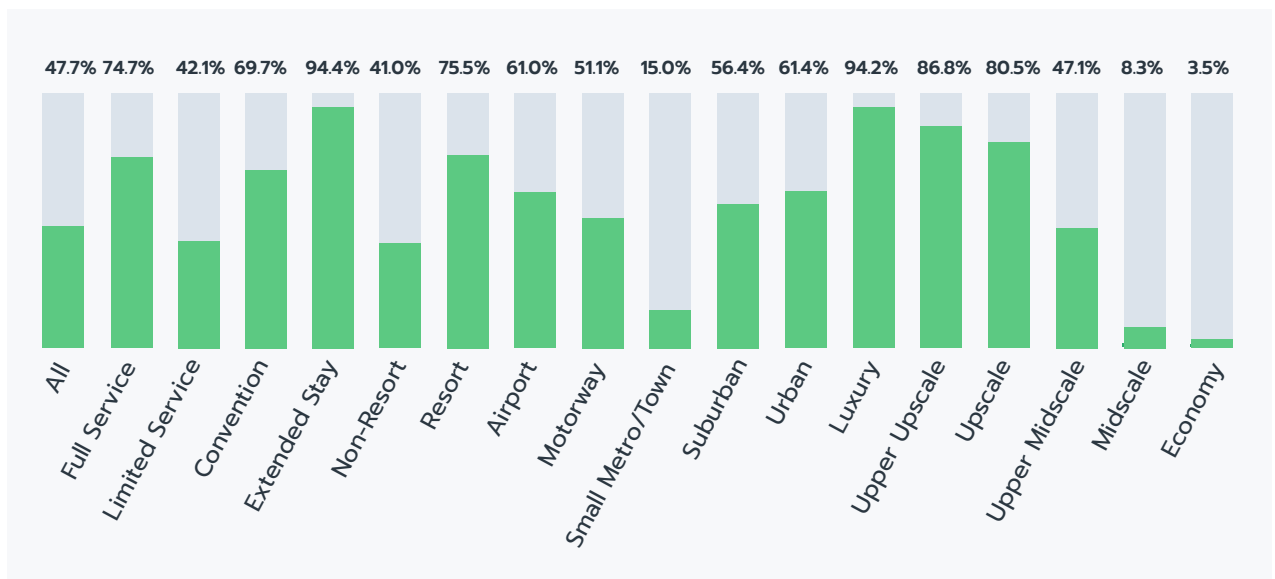
Top 30 Metropolitan Areas



→ ENERGY TRACKING

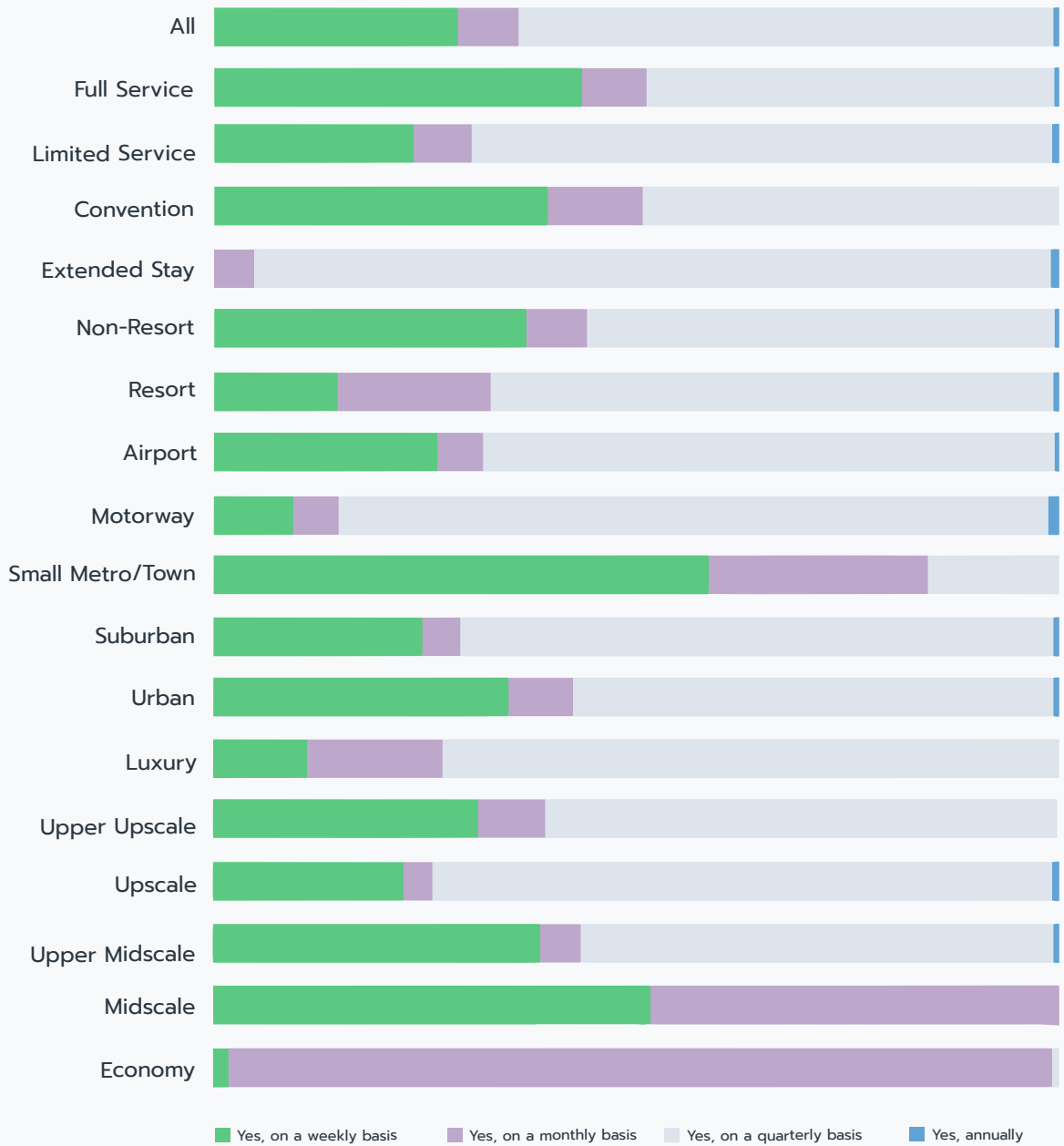
Hotels tracking their energy consumption is an emerging practice.

- Slightly less than half of all hotels (47.7%) track energy consumption, most of whom do so every quarter.
- The prevalence of tracking energy consumption among full service hotels (74.7%) is almost twice that of limited service hotels (42.1%).
- Across the property types, nearly all extended stays (94.4%) track energy consumption, while only two in five non-resorts do so.
- By location, more than three in five hotels in urban areas (61.4%) track energy consumption, which is four times more than hotels in small metro and town areas (15.0%).
- Across the STR chain scale, higher segments are associated with higher prevalence rates. Virtually all luxury hotels (94.2%) track energy consumption, while only 3.5% of economy hotels do so.
- Among hotels that track energy use, most hotels track energy use on a quarterly basis (30.1%), followed by a weekly basis (13.8%) and a monthly basis (3.4%). Less than 1% of all hotels track energy use on an annual basis.



Emerging practice

Energy Tracking

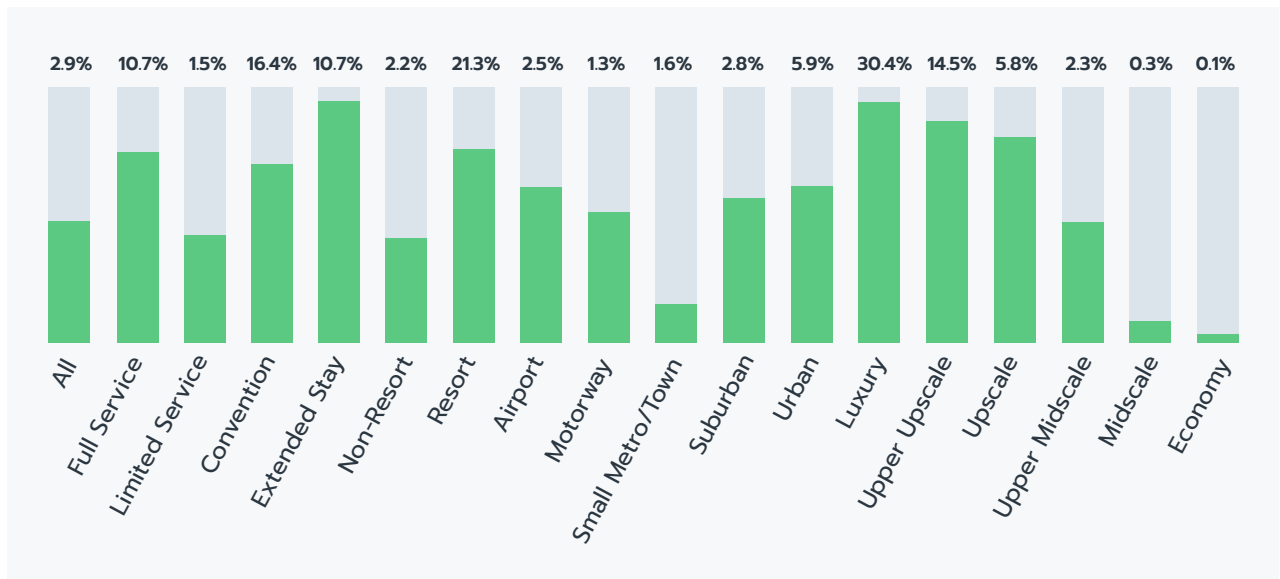


**Responses for no energy tracking are not included in this chart for better visualization, therefore the bars do not add up to 100%.*

→ ENERGY SUB-METERING

Hotels sub-metering energy consumption is an innovative practice.

- Slightly less than 3% of all hotels use sub-meters to track energy consumption across different areas of their properties.
- Full service hotels (10.7%) are seven times more likely to use sub-meters to track energy consumption than limited service hotels (1.5%).
- Sub-metering is the most common at resorts (21.3%) and extended stays (10.7%) among all property types. It is less common across the rest of the property types, where the prevalence rates are lower than 3%.
- This is an emerging practice for luxury hotels (30.4%) and an innovative practice for the rest of the STR chain scale segments (0.1% to 14.5%).

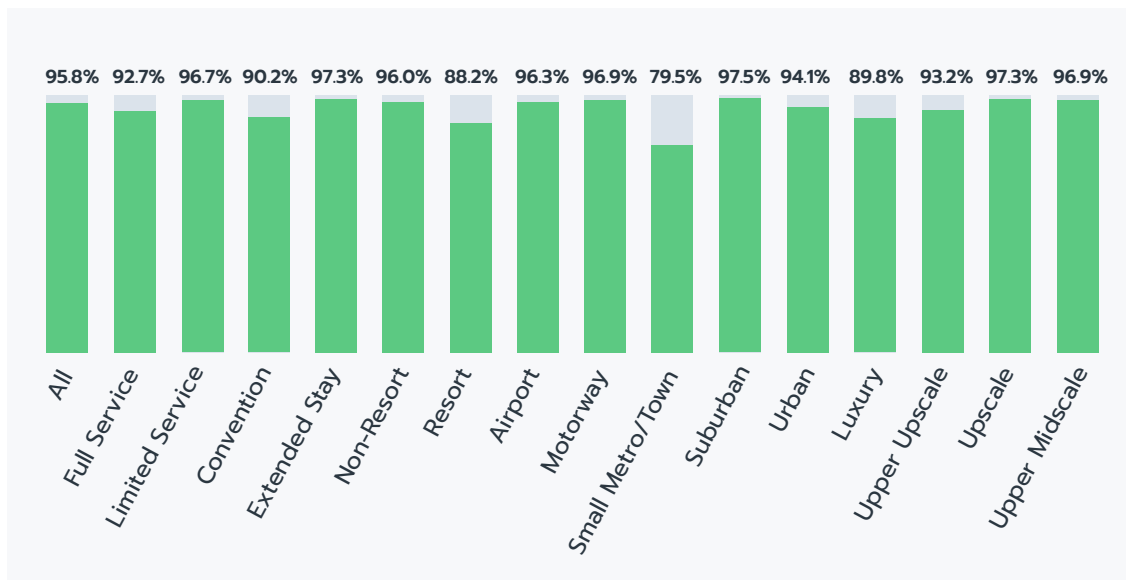


Innovative practice

→ BENCHMARKING ENERGY AGAINST PEERS

Hotels benchmarking energy consumption against peers in the company portfolio is a common practice.

- Nearly all hotels (95.8%) benchmark their energy performance against peers within the company portfolio (where applicable).
- This is a common practice across all hotels regardless of service, property, and location types, as well as STR chain scale segment.
- Most location types have an uptake rate of around 90%, except for small metro/town hotels (79.5%), where the prevalence is much lower than the national average.

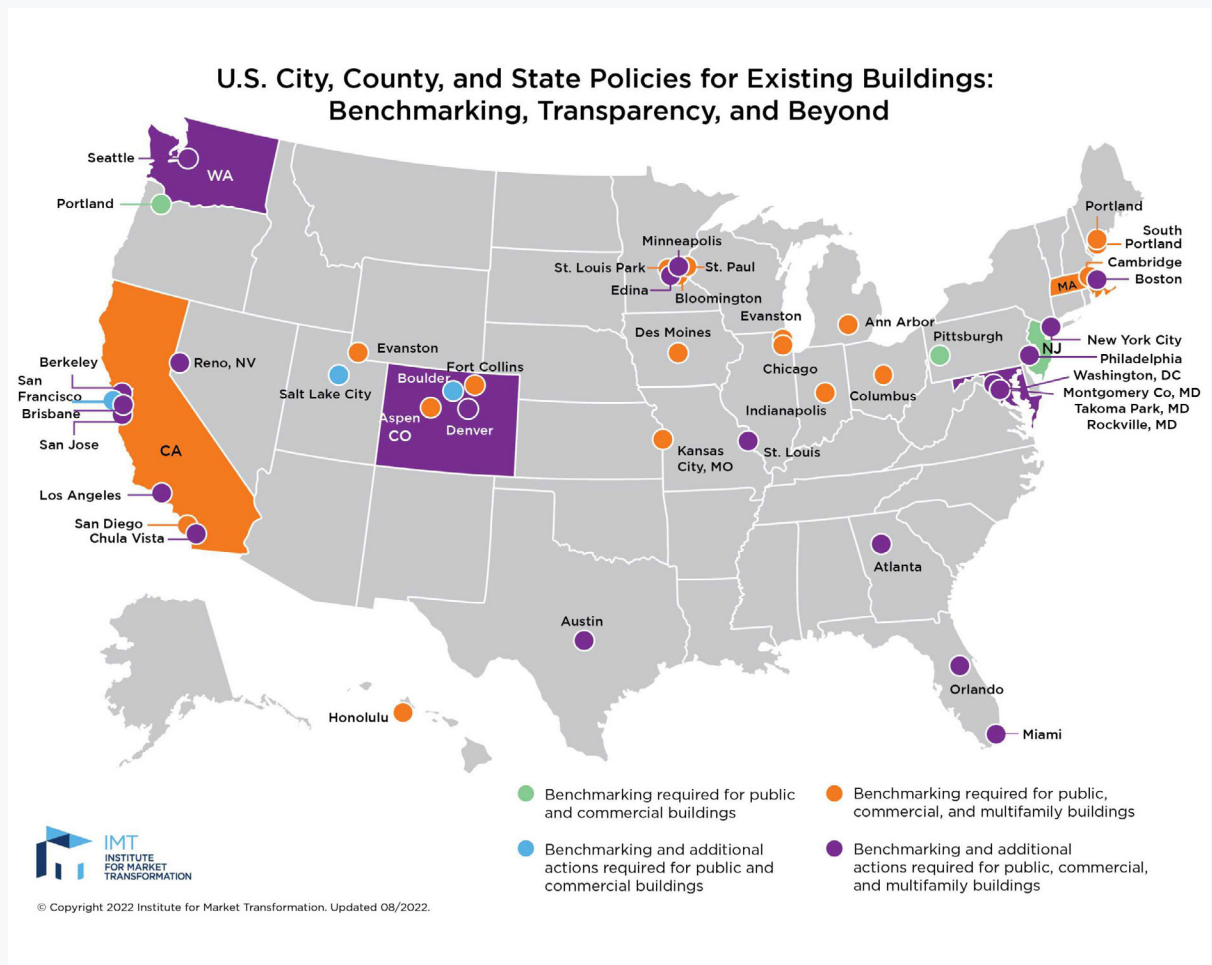


**Midscale and Economy categories are excluded from the chart as data is insufficient.*

Common practice

MANDATORY ENERGY BENCHMARKING

Many state and local governments have adopted mandatory building energy benchmarking and transparency policies for existing buildings. Based on research from the Institute of Market Transformation, the cities, counties, and states that have enacted such policies include the following in the [map](#) below.



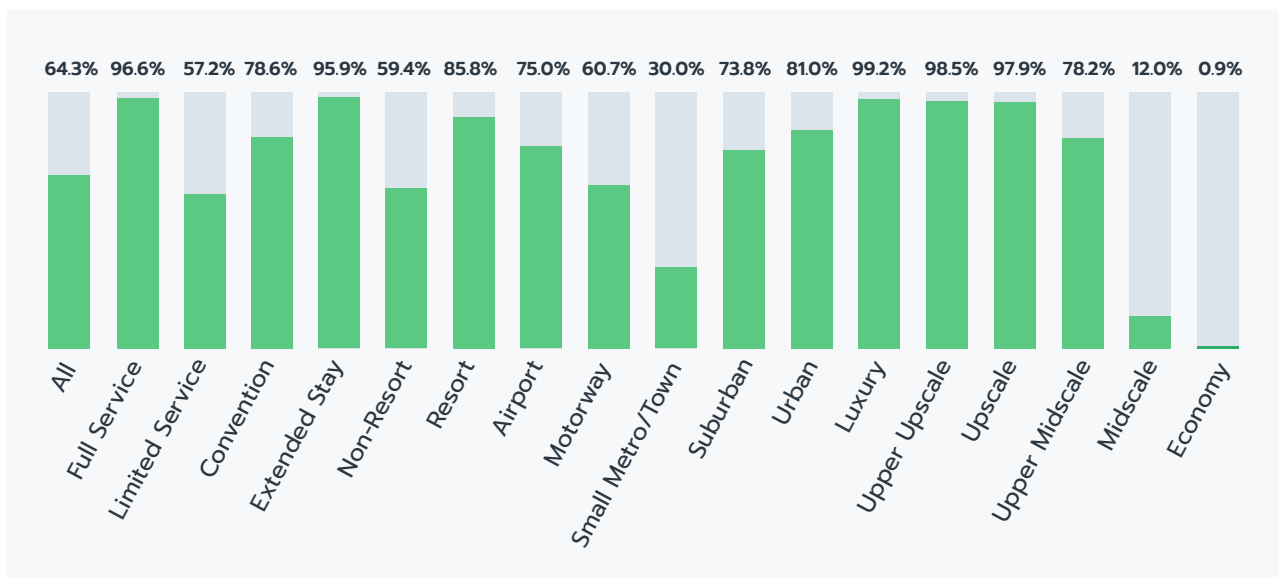
Some examples of policies include:

- **Colorado (CO):**
 - [House Bill 21-1286, “Energy Performance for Buildings,”](#): The bill requires owners of large commercial, multifamily, and public buildings of 50,000 square feet or more to report their energy use to the Colorado Energy Office (CEO).
- **Montgomery County (MD):**
 - [Energy Benchmarking Law](#): The law requires owners of buildings of 25,000 gross square feet or more to track energy use and report it to the county for public disclosure. The buildings are also required to meet long-term energy use requirements under the Building Energy Performance Standards.

→ PREVENTIVE MAINTENANCE PROGRAM

Hotels implementing a preventive maintenance plan which checks, at least quarterly, that building energy and water fixtures are functioning properly is an established practice.

- 64.3% of all hotels implement preventative maintenance plans for building energy and water equipment.
- This is a common practice for full service hotels (96.6%), where nearly all hotels have a preventative maintenance plan, and an established practice for limited service hotels (57.2%).
- Across most property types, this is a common practice where the prevalence ranges between 78.6% to 95.9%. Non-resort hotels are the only exception, where this is an established practice with a lower prevalence of 59.4%.
- By location, urban areas top the list with more than four in five hotels adopting this practice. Airport areas (75.0%) come in second, followed by suburban areas (73.8%). Small metro and town areas rank the lowest for this practice compared to other location types.
- Higher STR chain scale segments are associated with higher prevalence rates of this practice. Luxury hotels take the lead in this practice (99.2%).

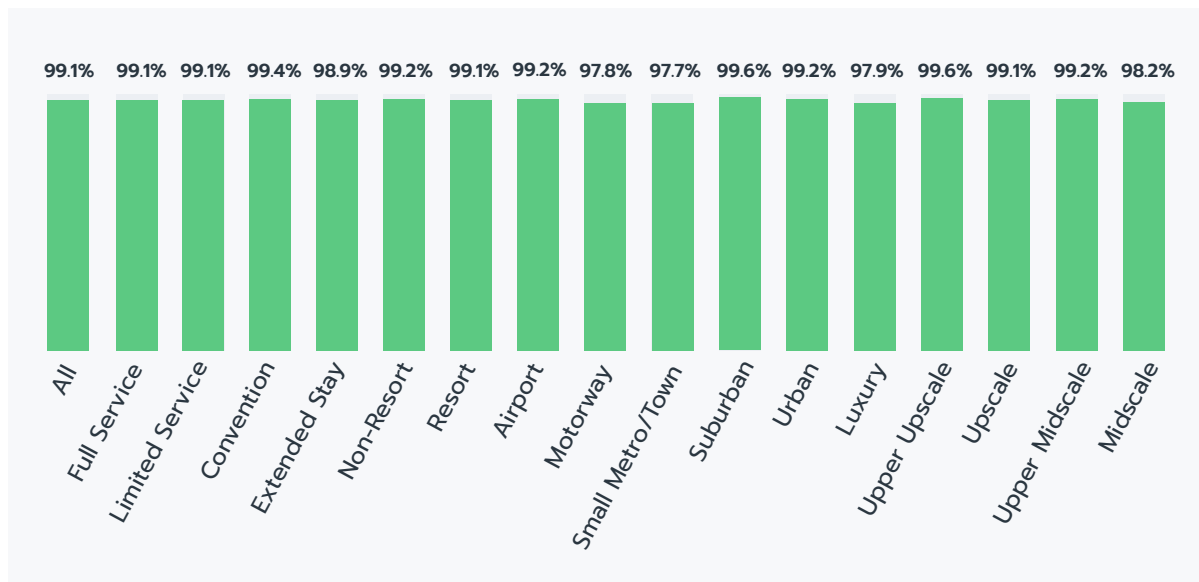


Established practice

→ ENERGY EFFICIENCY MEASURES

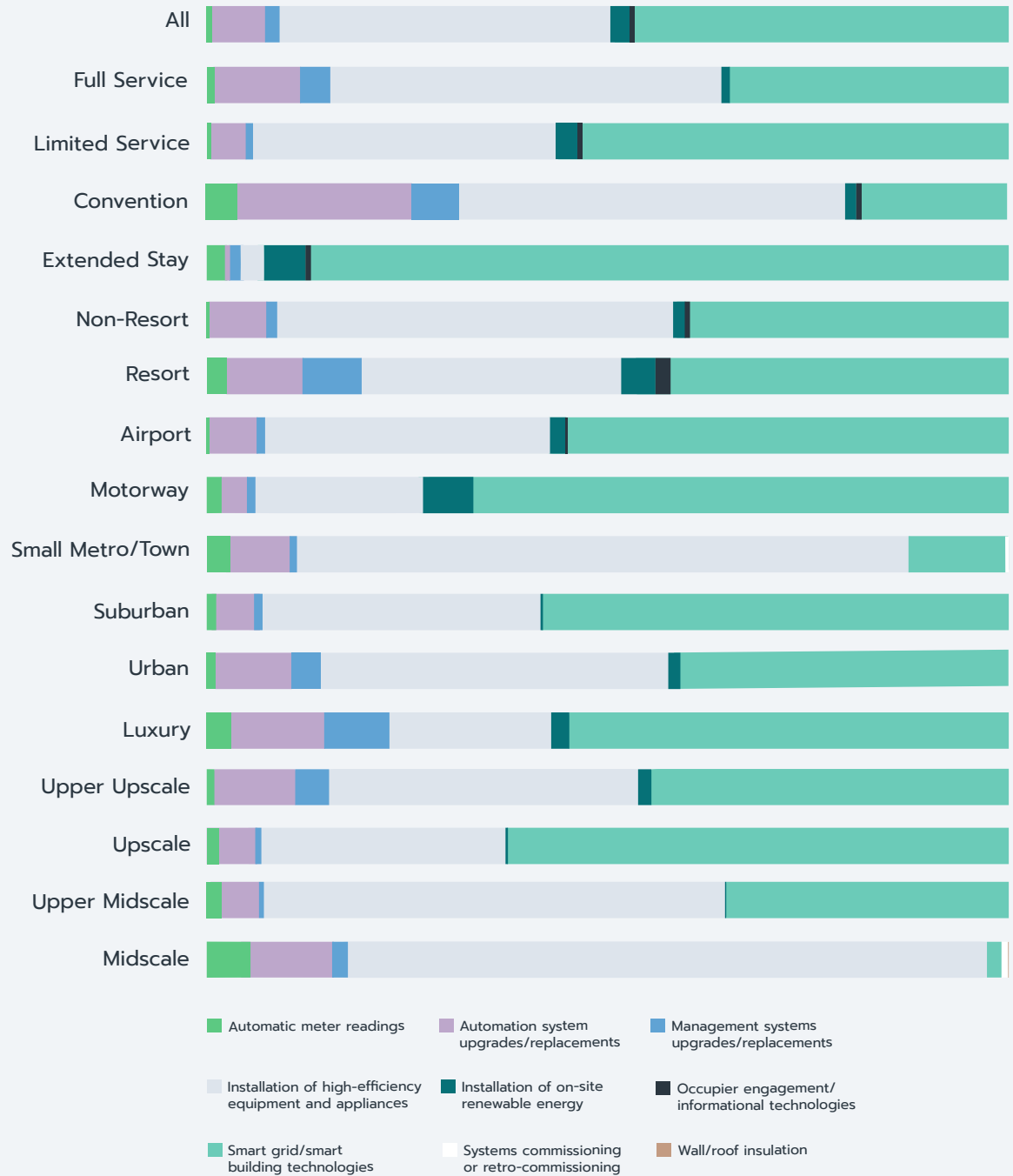
Hotels implementing energy efficiency measures is a common practice.

- Almost all hotels (99.1%) have implemented energy efficiency measures in the past three years.
- The prevalence of this practice is consistently above 95% across all service, property, and location types, as well as STR chain scale segments.
- The top three energy efficiency measures that hotels implement are smart grid and smart building technologies (51.2%), high-efficiency equipment and appliances (40.4%), and automation system upgrades (6.4%).



Common practice

Types of Energy Efficiency Measures



*Economy category is excluded from the chart as data is insufficient.

**The bars do not add up to 100% because multiple measures can be implemented.



*Gaylord Rockies Resort and
Convention Center, Colorado*

Gaylord Rockies recently installed a Combined Heat and Power (“CHP”). These generators not only improve thermal and energy resilience for the hotel but also bring long term savings for the hotel through energy efficiency. By using wasted heat to provide hot water, the hotel’s carbon footprint was reduced by 30.4% or 14,000 tons per year.





ENERGY EFFICIENCY REGULATIONS

In 2019, more than 80 bills related to energy efficiency have been enacted across 42 states and Puerto Rico. States continued their interest in updating or expanding their Energy Efficiency Resource Standards (EERS) policies and focused on improving energy efficiency in buildings and appliances. Several states also considered and enacted policies for incentivizing or financing energy efficient technologies.

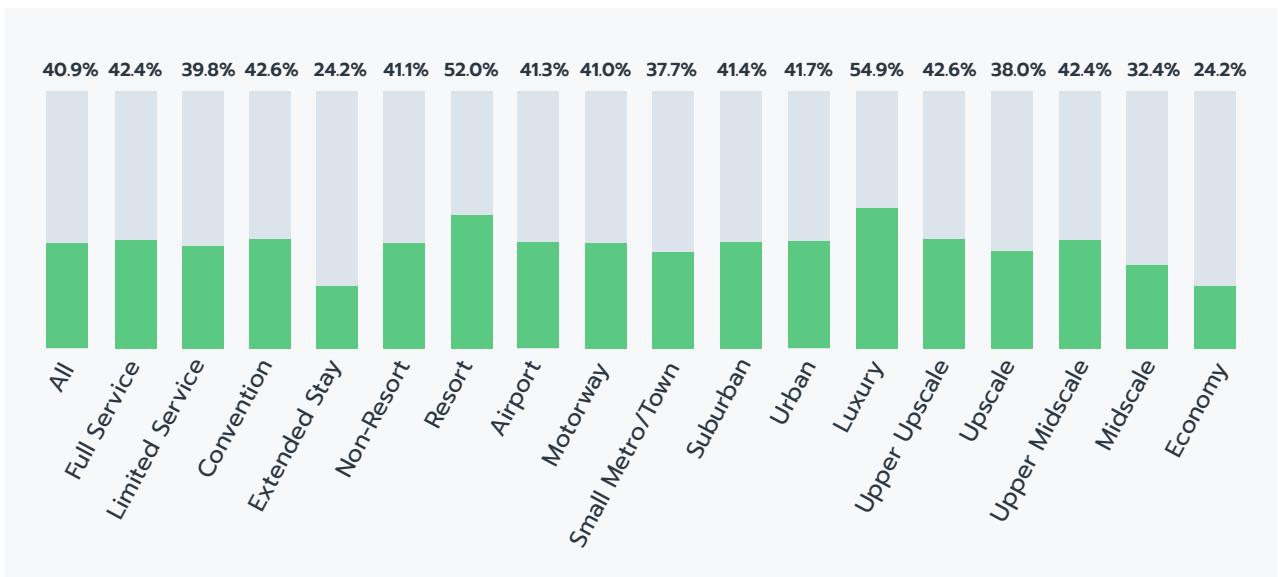
One example is Washington, DC, which has a comprehensive energy efficiency legislation. It has a wide range of policies and initiatives that target energy efficiency. Such policies include:

- [Buildings and Energy Efficiency](#): The first-of-its-kind Building Energy Performance Standard (BEPS) establishes a minimum energy performance for commercial and multifamily buildings. Buildings that do not meet the standard are required to improve their energy performance by 20% over the 5-year compliance period or take other prescriptive actions.
- [Vehicle Excise Tax](#): The Act calls for the vehicle excise tax formula to be revised to incentivize electric and fuel-efficient vehicles over less efficient vehicles, with certain provisions to protect low- and middle-income residents.
- [Utility Incentive and Rebate Programs](#): The DC Sustainable Energy Utility provides rebates and incentives to make local businesses and buildings more energy efficient.

→ ENHANCED REFLECTIVE AND/OR INSULATED WINDOWS

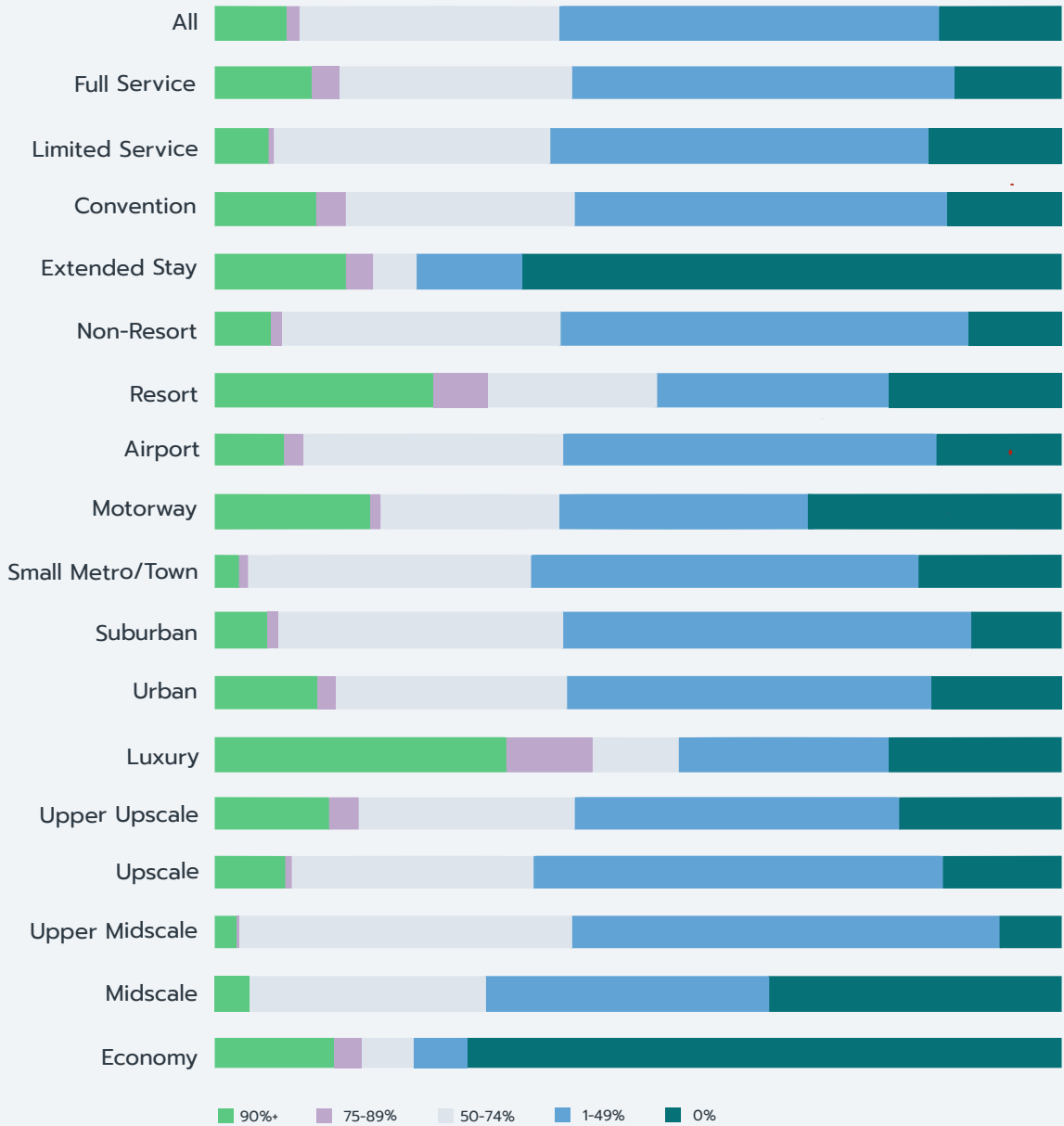
Hotels using enhanced reflective and/or insulated windows for at least half of all windows is an emerging practice.

- Two in five hotels (40.9%) have at least half of all windows enhanced with reflective and/or insulating characteristics to reduce the need for heating and cooling.
- The prevalence rates for both full service (42.4%) and limited service (39.8%) hotels are comparable to the national average.
- This is an established practice among resorts (52.0%) while it is still an emerging or innovative practice among other property types, with prevalence ranging from 24.2% to 42.6%.
- Hotels from the higher tiers of the STR chain scale are more likely to adopt this practice. Luxury hotels top the list with more than half adopting this practice, while less than a quarter of economy hotels adopt this practice.



Emerging practice

Percentage of Enhanced Reflective and/or Insulated Windows





*Hotel Marcel New Haven, Tapestry
Collection by Hilton, New Haven*

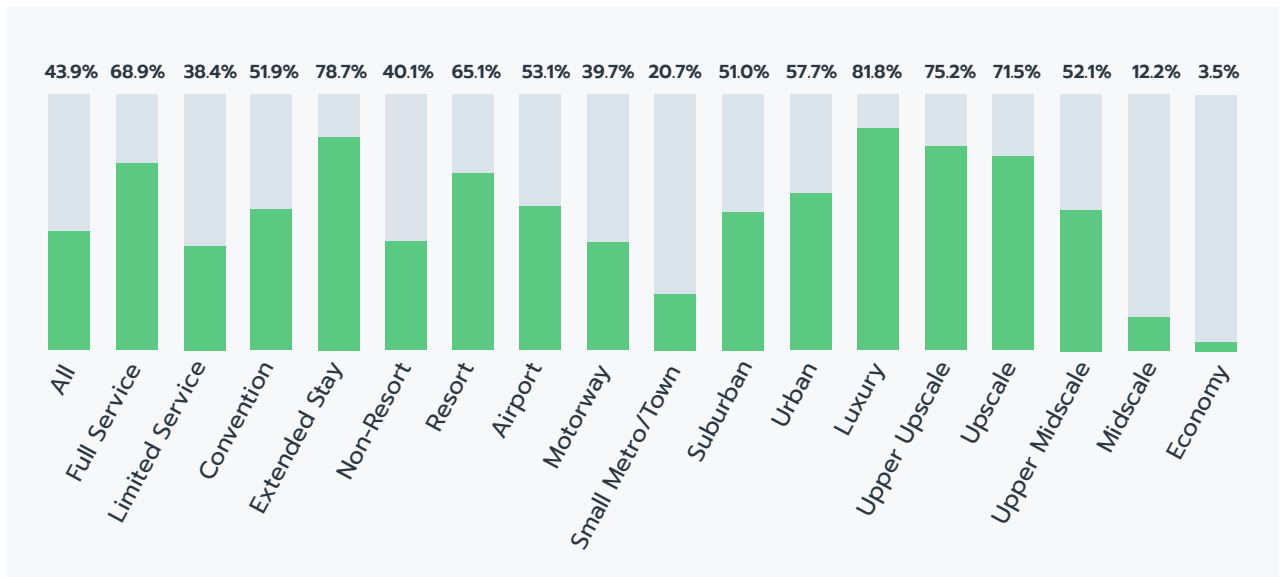
Though the building which houses Hotel Marcel New Haven was first constructed in 1967, its regular refurbishments with sustainability in mind has kept it ahead of the pack. It has been retrofitted with triple-glazed glass and insulation which contributes to energy efficiency by reducing heating demand.



→ INTERIOR LED LIGHTING

Hotels using LED in 90% or more of their interior lighting (excluding specialized bulbs for historic lighting fixtures such as antique chandeliers) is an emerging practice.

- 43.9% of all hotels use energy-efficient LED lighting for at least 90% of their interior lighting needs.
- The prevalence of using LED lighting is about 30 percentage points higher for full service hotels (68.9%) than for limited service hotels (38.4%).
- Extended stay (78.7%) is the property type that is most likely to adopt this practice, while non-resorts (40.1%) are least likely to do so.
- By location type, this is an established practice for urban (57.7%), airport (53.1%), and suburban (51.0%) hotels. There is lower uptake at motorway and small metro and town areas, where it is an emerging and innovative practice respectively.
- The adoption of this practice increases across the STR chain scale. It is a common practice for luxury (81.8%) and upper upscale hotels (75.2%) to use LED for at least 90% of their interior lighting needs. Conversely, for midscale (12.2%) and economy (3.5%) hotels, it is an innovative practice with low prevalence.



Emerging practice

CLIMATE ACTION



→ **Under climate action, seven best practices were assessed.** A common practice is to encourage the use of sustainable transportation. The next most adopted practice is planning and implementing carbon reduction initiatives, which is prevalent in more than half of all hotels. There are two emerging practices under climate action, which include measuring carbon emissions on a quarterly basis, as well as installing electric vehicle charging stations. Initiatives which involve renewable energy such as purchasing Renewable Energy Certificates (RECs), generating renewable energy onsite, and purchasing electricity from renewable sources are innovative practices that are gaining interest within the industry.

→ KEY FINDINGS

- **Common practices**

- Virtually all hotels (99.2%) have initiatives to encourage the adoption of sustainable transportation by staff and guests.

- **Established practices**

- More than half of all hotels plan and implement carbon reduction initiatives.

- **Emerging practices**

- Over 40% of all hotels measure carbon emissions, and most measure on a quarterly basis.
- 26.6% of all hotels install electric vehicle charging stations on their property.

- **Innovative practices**

- 15.2% of all hotels purchase renewable energy from the market, such as RECs, green tariffs, feed-in tariffs, and power purchase agreements.
- 14.2% of all hotels generate renewable energy onsite.
- 5.8% of hotels purchase all or part of their electricity from renewable sources.

→ COMPARING CARBON FOOTPRINT ACROSS THE COUNTRY

To compare the carbon footprint of hotels across the country, two carbon metrics were assessed: the HCMI rooms footprint per occupied room and hotel carbon footprint per square foot. The HCMI rooms footprint per occupied room was calculated based on the [Hotel Carbon Measurement Initiative \(HCMI\) Methodology](#), a commonly agreed methodology to measure carbon emissions developed by the hotel industry. Using HCMI to calculate carbon emissions ensures that data and calculations are consistent and comparable across properties and companies.

All carbon footprint calculations were made using hotel energy consumption data in 2021, collected for the Cornell Hotel Sustainability Benchmark (CHSB) 2023. CHSB is an industry-led global data collection and benchmarking initiative, with data on energy, water, and carbon emissions from over 25,000 hotels globally.

For a further breakdown of the carbon intensity by all of the remaining metropolitan areas and other environmental performance metrics, please refer to the latest CHSB report and public tool available on the [Greenview website](#).

→ HCMI ROOMS FOOTPRINT PER OCCUPIED ROOM

The latest Cornell Hotel Sustainability Benchmark (CHSB) found the median carbon footprint of one room-night stay among all hotels in the U.S. is 15.1 kgCO₂e.

- Among full service non-resorts, the three best-performing metropolitan areas with the lowest carbon footprint per occupied room are San José, CA (9.6 kgCO₂e), San Bernardino, CA (10.8 kgCO₂e), and San Diego, CA (13.5 kgCO₂e).
- Among limited service non-resorts, the three best-performing metropolitan areas with the lowest energy usage intensity are Modesto, CA (6.4 kgCO₂e), San Diego, CA (6.6 kgCO₂e), and San Bernardino, CA (6.7 kgCO₂e).
- All three best performers among limited service non-resorts are emitting less than one-third of the national average.
- Limited service hotels are more likely to have a lower median for carbon footprint per occupied room than full service hotels.

Top 25 Metro Areas by Median for Full Service Non-resort HCMI Rooms Footprint Per Occupied Room (kgCO2e)

Rank	Metro Area	Lower Quartile	Median	Upper Quartile
1	San José, CA	7.2	9.6	15.3
2	San Bernardino, CA	8.7	10.8	15.4
3	San Diego, CA	10.4	13.5	17.4
4	Los Angeles, CA	10.8	13.7	18.3
5	New York, NY	13.8	18.0	28.8
6	San Francisco, CA	12.2	18.3	25.5
7	Orlando, FL	15.1	20.5	31.9
8	Virginia Beach, VA	18.4	20.9	28.3
9	Boston, MA	15.9	21.0	32.1
10	Austin, TX	17.5	23.8	29.4
11	Miami, FL	19.3	24.1	37.5
12	Seattle, WA	19.7	24.8	32.9
13	Portland, OR	19.5	25.1	30.4
14	San Antonio, TX	16.3	26.6	40.2
15	Tampa Bay, FL	20.6	26.6	30.1
16	Philadelphia, PA	18.4	26.8	32.8
17	Phoenix, AZ	19.6	26.8	41.0
18	Baltimore, MD	21.2	26.9	38.4
19	Washington DC	22.4	27.3	36.4
20	Dallas-Fort Worth, TX	18.7	27.3	42.4
21	Cleveland, OH	13.7	29.6	43.1
22	Columbus, OH	21.7	29.9	45.2
23	Atlanta, GA	25.2	30.3	38.5
24	New Orleans, LA	21.5	30.4	42.9
25	Cincinnati, OH	18.5	30.8	43.9

- **Lower Quartile** – the 25-percent marker within the data set. Twenty-five percent of the properties within the geography and segment were at or below this figure.
- **Median** – the middle value found within the geography and segment grouping.
- **Upper Quartile** – the 75-percent marker within the data set. Seventy-five percent of the properties within the geography and segment were at or below this figure.

Top 25 Metro Areas by Median for Limited Service Non-resort HCMI Rooms Footprint Per Occupied Room (kgCO2e)

Rank	Metro Area	Lower Quartile	Median	Upper Quartile
1	Modesto, CA	5.8	6.4	7.2
2	San Diego, CA	5.6	6.6	8.0
3	San Bernardino, CA	5.6	6.7	8.2
4	Sacramento, CA	6.0	6.8	8.0
5	Buffalo, NY	5.6	7.1	10.1
6	Ventura, CA	5.7	7.4	7.6
7	San Francisco, CA	6.2	7.4	9.4
8	Los Angeles, CA	6.6	7.6	9.3
9	Syracuse, NY	6.0	7.9	9.1
10	San José, CA	6.5	8.2	10.9
11	Hartford, CT	7.1	8.7	10.4
12	Albany, NY	6.4	8.9	11.0
13	Providence, RI	7.4	9.3	10.6
14	Columbia, SC	8.7	10.2	13.8
15	Bridgeport, CT	8.6	10.4	13.7
16	Tempe, TX	9.4	10.4	12.3
17	Allentown, PA	8.4	10.5	13.0
18	Portland, ME	5.6	10.7	12.1
19	Boise City, ID	8.4	11.2	13.1
20	Boston, MA	9.7	11.3	13.4
21	Seattle, WA	8.9	11.3	15.1
22	Augusta, GA	9.1	11.6	15.8
23	Raleigh, NC	8.3	11.7	14.5
24	Charleston, SC	11.2	11.8	14.0
25	Portland, OR	9.9	11.8	14.8

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→ HOTEL CARBON FOOTPRINT PER SQUARE FOOT (KGC02E)

The latest Cornell Hotel Sustainability Benchmark (CHSB) found that the median carbon footprint per square foot among all U.S. hotels is 4.3 kgCO₂e.

- Among full service non-resorts, the four best-performing metropolitan areas with the lowest carbon footprint per square foot are Sacramento, CA (2.5 kgCO₂e), Providence, RI (2.6 kgCO₂e), San José, CA (2.6 kgCO₂e), and Syracuse, NY (2.6 kgCO₂e).
- Among limited service non-resorts, the three best-performing metropolitan areas with the lowest carbon footprint per square foot are Syracuse, NY (2.1 kgCO₂e), Stockton, CA (2.2 kgCO₂e), and Bakersfield, CA (2.3 kgCO₂e).
- Limited service hotels are more likely to have a lower median for carbon footprint per square foot than full service hotels.

Top 30 Metro Areas by Median for Full Service Non-resort Hotel Carbon Footprint Per Square Foot (kgCO2e)

Rank	Metro Area	Lower Quartile	Median	Upper Quartile
1	Sacramento, CA	2.4	2.5	3.7
2	Providence, RI	1.6	2.6	6.3
3	San José, CA	2.2	2.6	3.5
4	Syracuse, NY	1.9	2.6	3.9
5	Raleigh, NC	1.9	2.8	5.5
6	Albany, NY	1.9	2.8	4.0
7	Charlotte, NC	2.0	3.0	5.9
8	Los Angeles, CA	2.2	3.0	4.0
9	San Francisco, CA	2.3	3.1	4.1
10	San Diego, CA	2.2	3.2	4.7
11	Tucson, AZ	2.6	3.2	6.8
12	Hartford, CT	2.4	3.3	6.0
13	Greenville, SC	2.4	3.4	8.0
14	Virginia Beach, VA	2.4	3.4	7.0
15	Knoxville, TN	3.0	3.6	4.5
16	Louisville, KY	2.7	3.7	8.2
17	Lexington, KY	3.3	3.7	5.1
18	San Bernardino, CA	2.0	3.7	6.2
19	Portland, OR	2.9	3.8	6.4
20	Las Vegas, NV	3.2	3.9	8.0
21	Philadelphia, PA	2.7	4.0	7.5
22	Orlando, FL	2.8	4.0	7.1
23	Baton Rouge, LA	2.5	4.1	10.7
24	Charleston, SC	2.4	4.2	7.4
25	Richmond, VA	3.0	4.3	7.4
26	Jacksonville, FL	2.7	4.3	6.4
27	Memphis, TN	2.8	4.3	7.2
28	Birmingham, AL	2.8	4.4	8.4
29	Oklahoma City, OK	3.4	4.4	10.6
30	San Antonio, TX	2.9	4.4	8.7

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- **Median** – the middle value found within the geography and segment grouping.
- **Upper Quartile** – the 75-percent marker within the data set. Seventy-five percent of the properties within the geography and segment were at or below this figure.

Top 30 Metro Areas by Median for Limited Service Non-resort Hotel Carbon Footprint Per Square Foot (kgCO₂e)

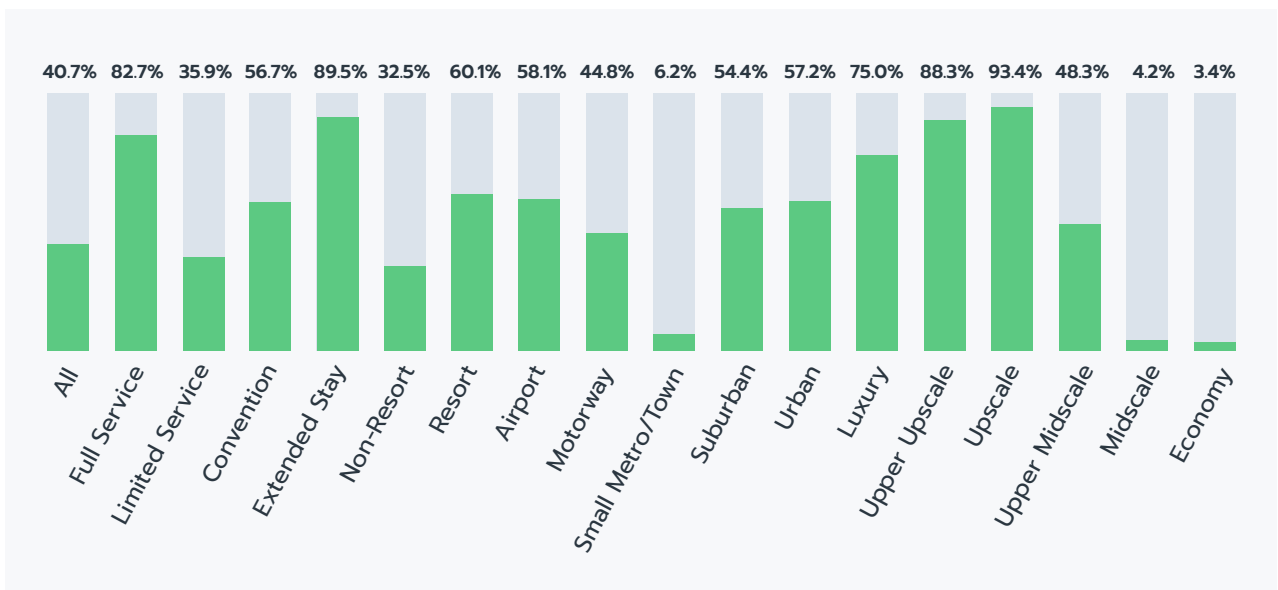
Rank	Metro Area	Lower Quartile	Median	Upper Quartile
1	Syracuse, NY	1.7	2.1	2.7
2	Stockton, CA	1.4	2.2	3.3
3	Bakersfield, CA	1.5	2.3	3.2
4	McAllen, TX	2.1	2.4	7.4
5	Beaumont-Port Arthur, TX	2.2	2.5	4.5
6	Poughkeepsie, NY	1.9	2.5	3.2
7	Springfield, MA	1.8	2.6	3.8
8	Sacramento, CA	2.0	2.6	3.3
9	San José, CA	2.4	2.7	3.7
10	Providence, RI	2.4	2.8	3.9
11	Albany, NY	2.0	2.8	3.9
12	Modesto, CA	1.8	2.8	3.3
13	San Francisco, CA	2.2	2.8	3.5
14	Tyler, TX	2.3	2.8	6.5
15	Buffalo, NY	2.1	2.8	3.3
16	Fresno, CA	1.9	2.9	3.4
17	San Bernardino, CA	2.0	2.9	4.5
18	San Diego, CA	2.1	2.9	3.5
19	Ventura, CA	2.1	2.9	3.4
20	Winston-Salem, NC	2.6	2.9	4.6
21	Los Angeles, CA	2.2	3.0	3.8
22	York, PA	2.3	3.0	4.2
23	Clarksville, TN-KY	2.6	3.1	4.6
24	Burlington, VT	2.5	3.1	4.5
25	Lancaster, PA	2.3	3.1	4.0
26	Las Cruces, NM	2.3	3.2	5.3
27	Augusta, GA	2.7	3.2	5.4
28	Baltimore, MD	2.7	3.3	5.3
29	Huntsville, AL	2.7	3.3	6.1
30	Rochester, NY	2.3	3.3	4.0

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→ CARBON FOOTPRINT TRACKING

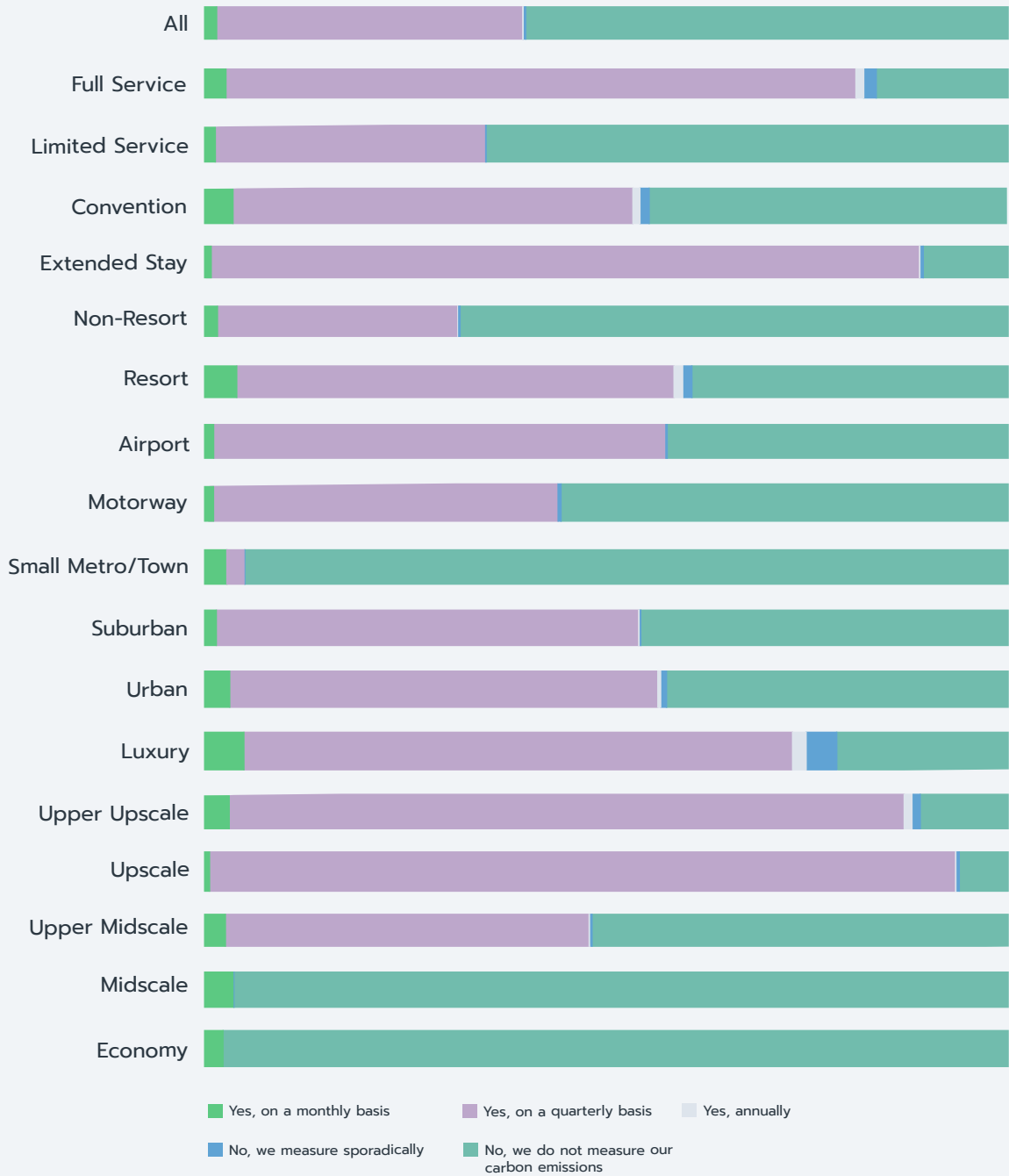
Hotels measuring carbon emissions is an emerging practice.

- Over 40% of all hotels measure carbon emissions, and most measure on a quarterly basis.
- Variations in uptake of this practice across different service, property, and location types, as well as STR chain scale segments are similar to that of planning and implementing carbon reduction initiatives, but at a lower prevalence rate.
- More than eight in ten full service hotels implement this practice, but only 35.9% of limited service hotels do the same.
- Extended stays significantly outperform other property types with an uptake rate of 89.5%.
- This is an established practice in most location types, except for hotels at motorways and small metro/towns, where it is an emerging and innovative practice respectively.
- Higher tiers of the STR chain scale generally have high uptake rates which peak at 93.4% for upscale hotels. However, it decreases significantly in lower tiers, with economy having the lowest uptake rate of 3.4%.
- Out of the hotels that measure carbon emissions, most of them do so on a quarterly basis (37.5%). Some measure more frequently on a monthly basis (3.0%), while a small portion measure carbon emissions annually (0.2%).



Emerging practice (quarterly basis)

Frequency of Carbon Footprint Tracking



The Rise of Carbon-Related Disclosures

A new proposed rule to enhance and standardize climate-related disclosures by the U.S. Securities and Exchange Commission will require companies to report on three categories of disclosure:

- **Climate-related risks:** The company's governance of climate-related risks and relevant risk management processes
- **Material risks:** If climate-related risks identified have had or are likely to have a material impact on its business and consolidated financial statements which may manifest over short to long-term.
- **Targets or Transition plans:** How the identified climate-related risks have affected or are likely to affect the company's strategy, business model, and outlook and the impact of climate-related events on the line items of the company's consolidated financial statements.

Large companies will have to begin Scope 1 and 2 disclosures in 2024, while more time is given for the reporting of Scope 3 emissions, which will have to be disclosed together with Scope 1 and 2 emissions from 2025 onwards.

Multiple states in the nation have implemented policies to reduce greenhouse gas (GHG) emissions. Several states have statutory requirements to reduce state-wide GHG emissions and/or complete a state-wide inventory measuring emissions.

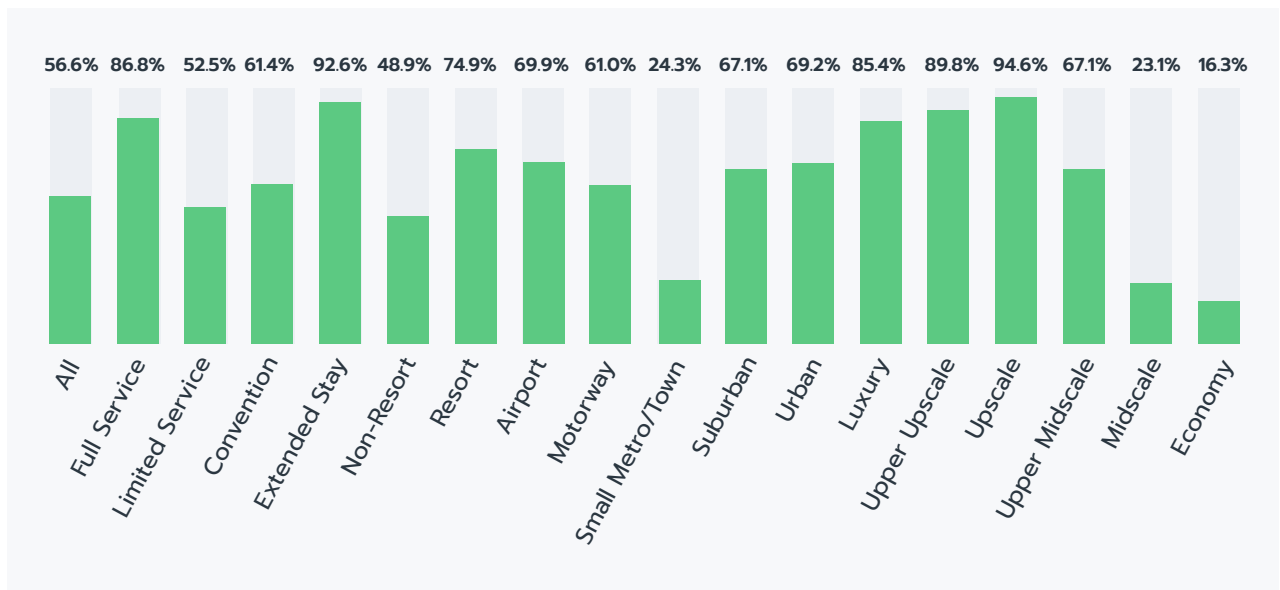
Some examples of policies include:

- **Pennsylvania (PA): Reporting Only**
 - **Climate Change Act:** Pennsylvania's Department of Environmental Protection is required to compile annual inventories of GHG emissions establishing emission trends, based on contributions from major sectors such as transportation, electricity generation, industrial, commercial, etc.
- **Rhode Island (RI): Reduction Targets Only**
 - **Resilient Rhode Island Act of 2014:** The legislation established targets for GHG reductions below 1990 levels of 10% by 2020, 45% by 2035, and 80% by 2050.
- **Washington (WA): Reduction Targets and Mandatory Reporting**
 - **Greenhouse Gas Emission Limits:** In 2020, the Washington Legislature set new greenhouse gas emission limits, which requires reduction to 1990 levels by 2020, 45% below 1990 levels by 2030, 70% below 1990 levels by 2040, and 95% below 1990 levels and achieve net zero emissions by 2050.
 - **Greenhouse Gas Reporting Requirements:** Facilities that emit at least 10,000 metric tons of carbon dioxide equivalent (MT CO₂e) per year of total GHG emissions in Washington are subject to mandatory reporting.

→ CARBON REDUCTION PLAN

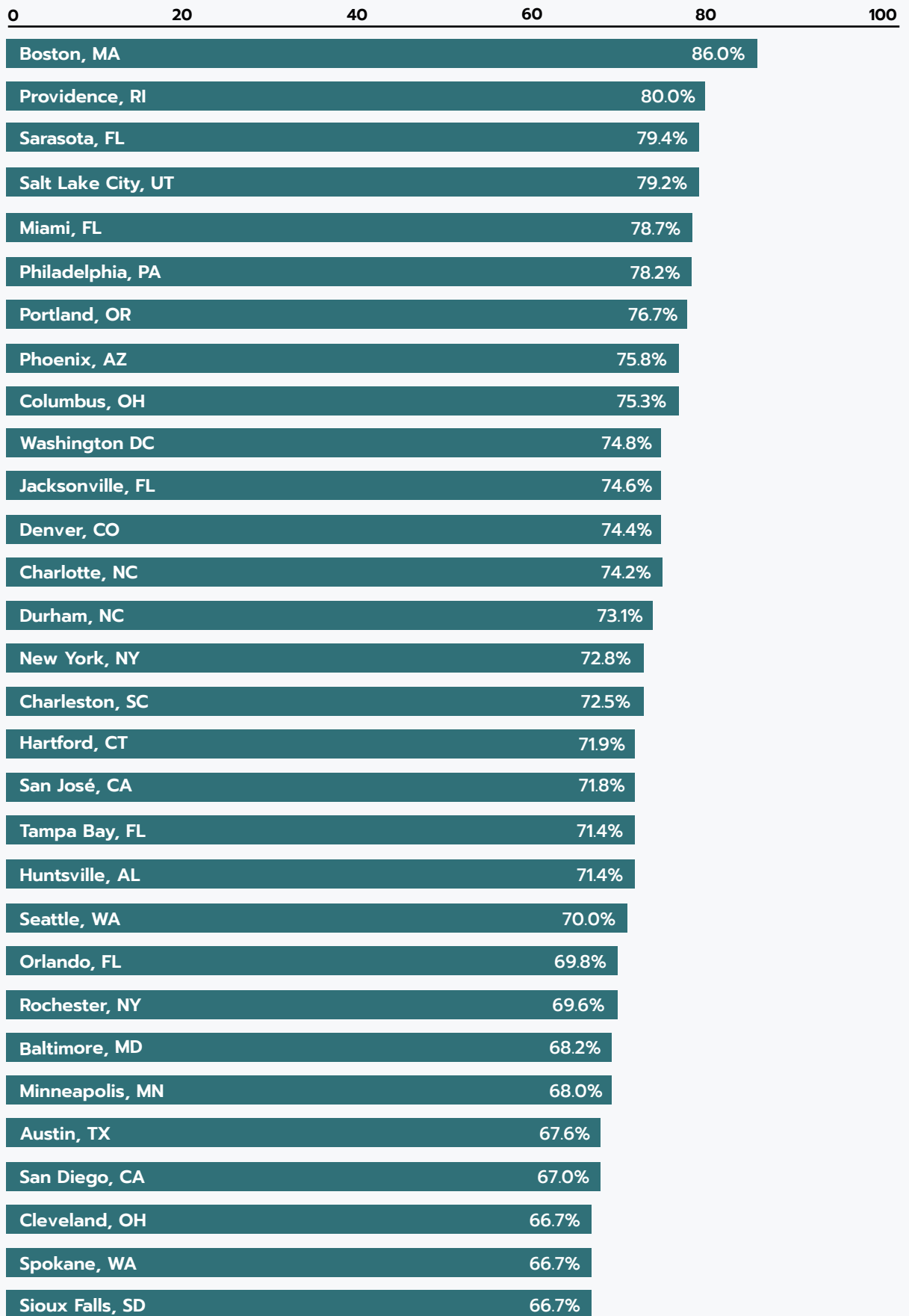
Hotels planning and implementing initiatives to reduce carbon emissions is an established practice.

- More than half of all hotels plan and implement carbon reduction initiatives.
- Full service hotels (86.8%) have a significantly higher uptake rate of this practice compared to limited service hotels (52.5%).
- Extended stays are the most likely to plan and implement carbon reduction initiatives with an uptake rate of 92.6%, while non-resorts are the least likely to do the same (48.9%).
- Prevalence rates for this practice are largely similar for most location types which is between 61.0% to 69.9%, except for small metro and town areas, where it falls to 24.3%.
- For most tiers in the STR chain scale, at least two out of three hotels uptake this practice, but it falls to less than 25% for midscale and economy hotels.
- The top three metropolitan areas for this practice are Boston, MA (86.0%), Providence, RI (80.0%), and Sarasota, FL (79.4%).



Established practice

Top 30 Metropolitan Areas





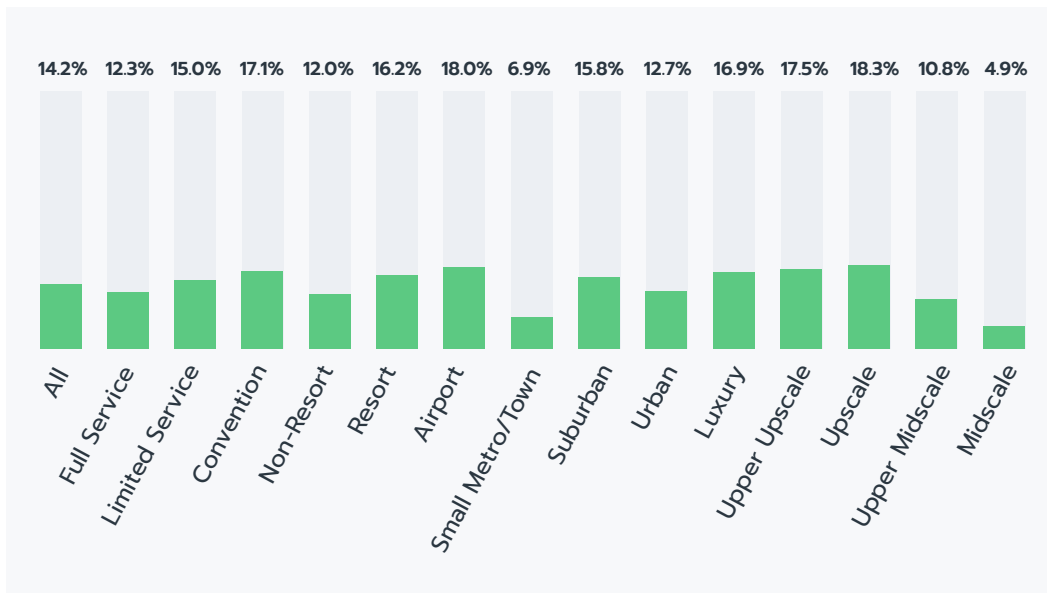
New York City's Climate Mobilization Act

[The Climate Mobilization Act](#) is a package of bills that combat climate change. Among the bills, the centerpiece bill is one which requires buildings over 25,000 square feet to cut climate emissions 40% by 2030 and more than 80% by 2050. Other bills include green roofs requirement on certain small and large buildings, establishing a Property Assessed Clean Energy (PACE) program, and imposing a five-cent fee on all paper bags.

→ ON-SITE RENEWABLE ENERGY

Hotels generating onsite renewable energy is an innovative practice.

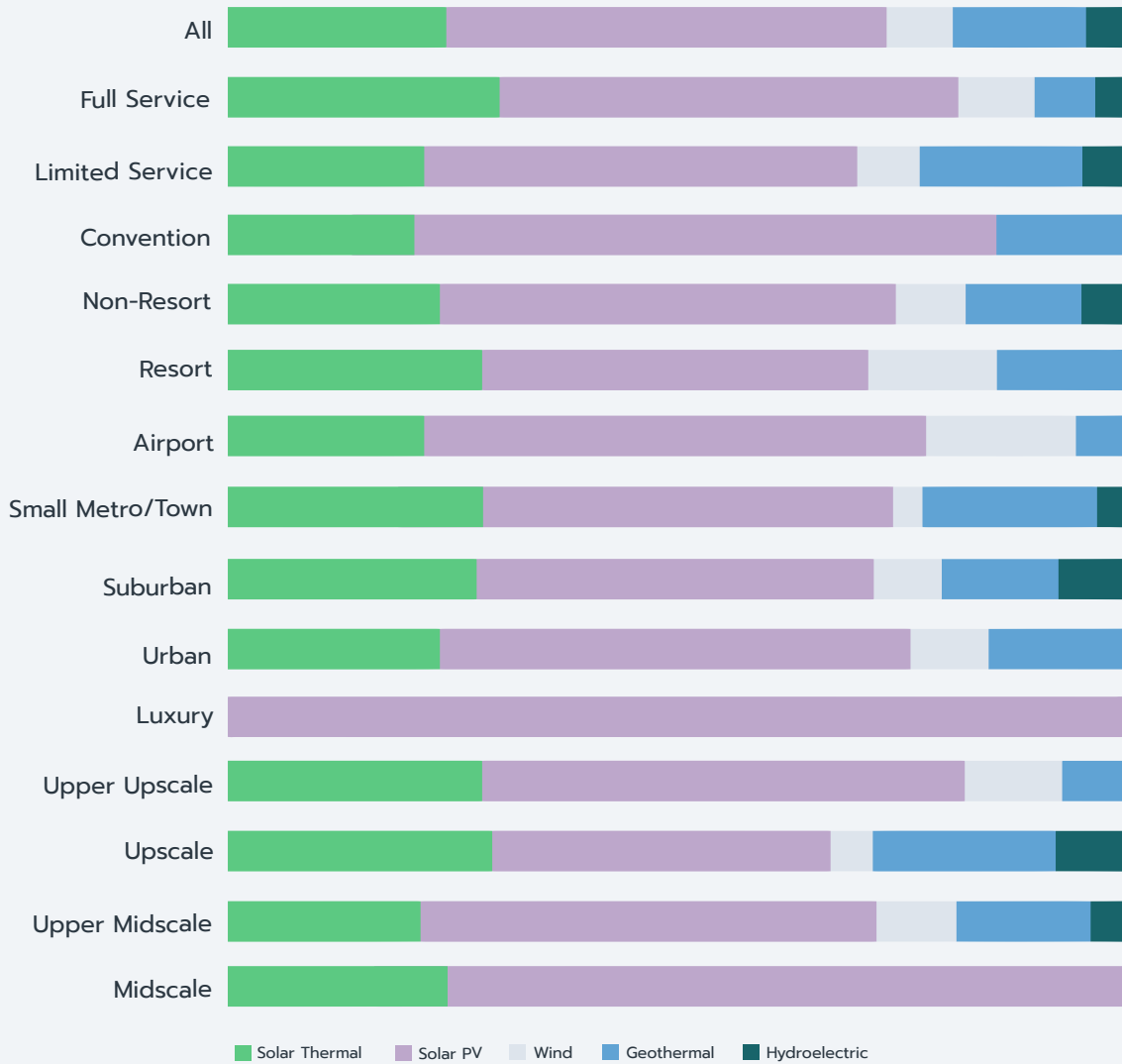
- 14.2% of all hotels generate renewable energy onsite.
- Prevalence of this practice is below 20% for all hotels regardless of service, property, and location types, as well as STR chain scale segment.
- However, most hotels have at least 10% prevalence rate, except for small metro/town and midscale hotels where prevalence rate is lower than 7%.
- For hotels that generate power onsite, solar PV is the most popular option (1.7%), followed by solar thermal (0.9%) and geothermal (0.5%).



*Extended Stay, Motorway, and Economy categories are excluded from the chart as data is insufficient.

Innovative practice

Type of On-Site Renewable Energy



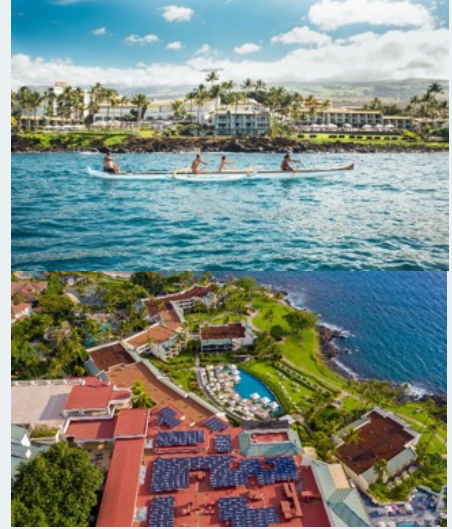
*Extended Stay, Motorway, and Economy categories are excluded from the chart as data is insufficient.

**The bars do not add up to 100% as responses indicating no onsite renewable energy are excluded.



Wailea Beach Resort - Marriott, Maui

In Hawaiian mythology, the demigod Māui climbs to the top of Haleakala to lasso the sun and slow its journey across the sky so that the people could grow more food, catch fish, and live most productively. In the spirit of Māui, the resort invested \$2 million to build a rooftop solar farm that generates an estimated solar production of 663,162 kWh in the first year. The energy generated by the solar farm will reduce the use of oil by 1,086 barrels annually and reduce the resort's carbon footprint, which approximately equates to 7,753 palm trees and 612 acres of tropical rainforest.



Grants and Rebates for Renewable Energy Installation

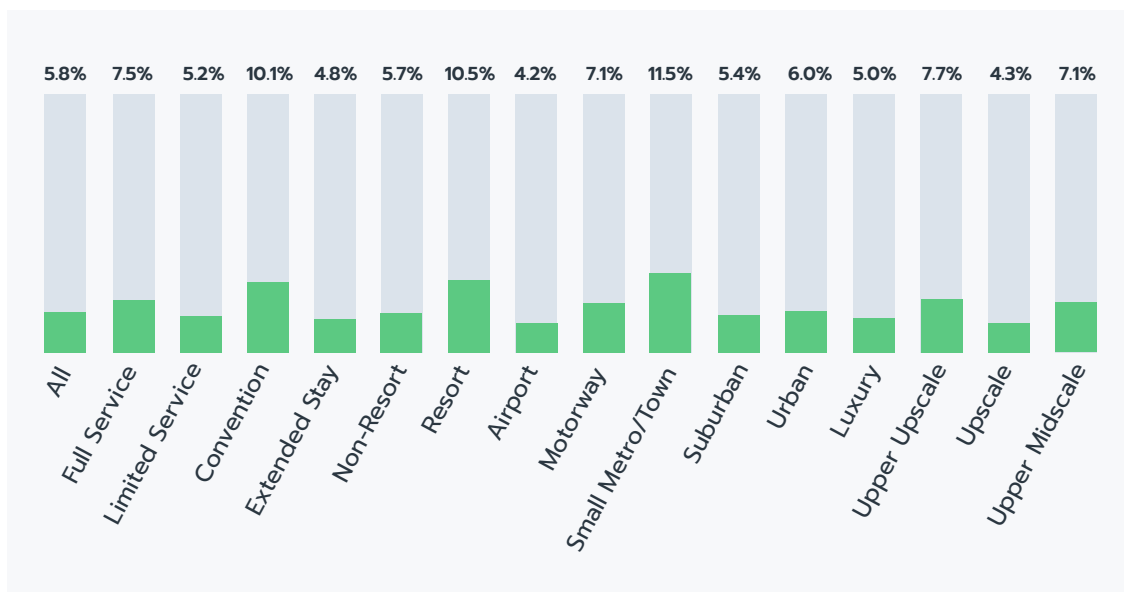
To meet greenhouse gas reduction targets, many state and local governments set requirements and implemented programs to encourage businesses to switch to renewable energy. Majority of such programs are in the form of grants and rebates. Example of programs include:

- **New York (NY):**
 - **NY Sun Megawatt Block Program:** NY-Sun offers financial incentives to install solar panels for residential, non-residential, and large commercial and industrial projects. Incentive rates depend on the location as well as the size of the block.
- **Delaware (DE):**
 - **Green Energy Program:** The program provides grants and incentives for the installation of qualifying photovoltaic (PV), solar water heating, wind turbine, and geothermal heat pump systems. Since the start of the program in 1999, grant funding has been provided to more than 300 Delaware renewable energy projects.
- **California (CA):**
 - Non-residential buildings in San Francisco will need to provide all on-site electricity demands from 100% renewable sources. Depending on the size of the building, the date on which the new requirement apply differs.

→ RENEWABLE ELECTRICITY

Hotels purchasing all or part of their electricity from renewable sources is an innovative practice.

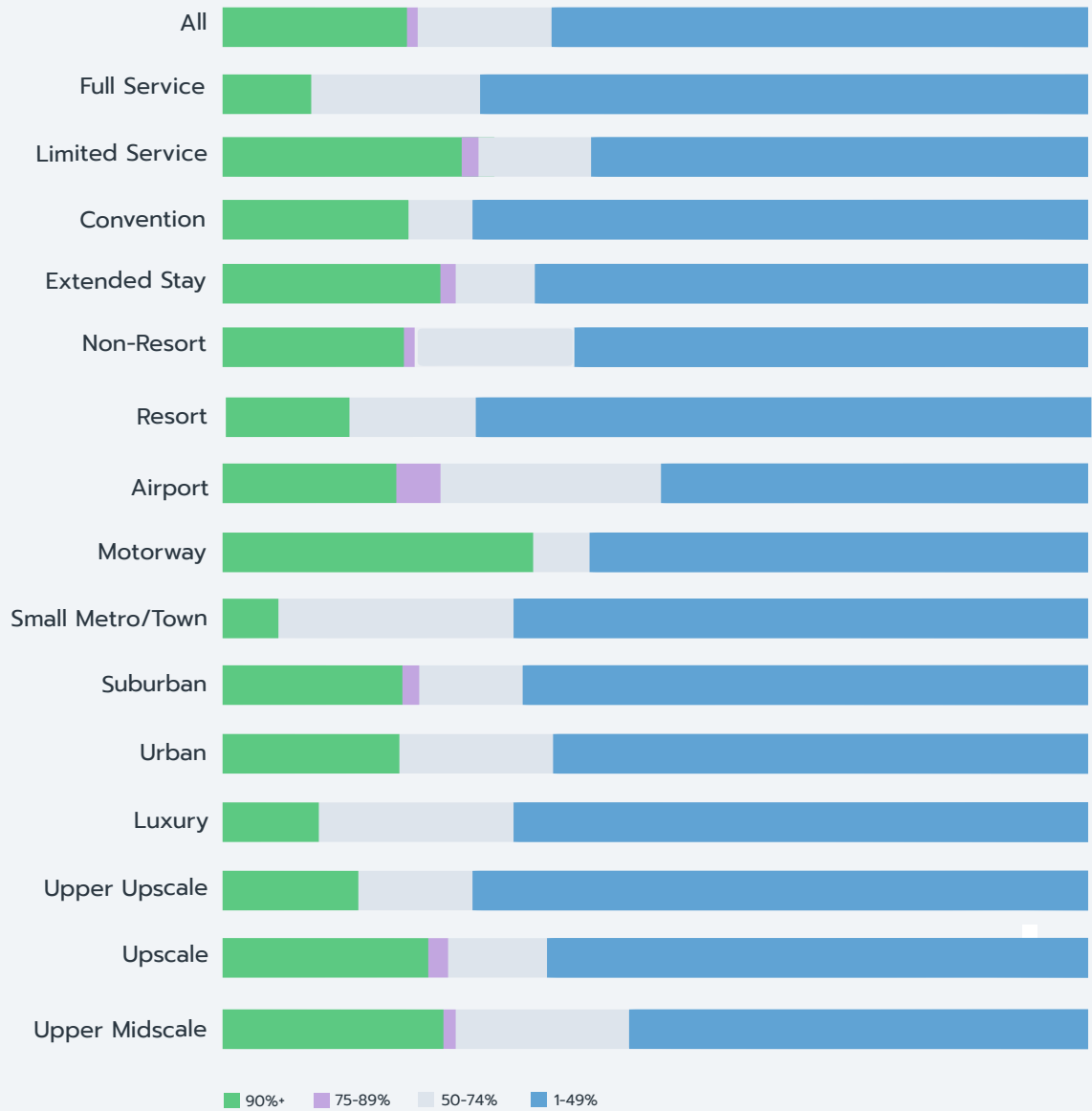
- 5.8% of hotels purchase all or part of their electricity from renewable sources.
- Most hotels, regardless of service, property, and location types, as well as STR chain scale segments have uptake rates of less than 10%, except for conventions, resorts, and hotels at small metro/towns which have uptake rates between 10.1% and 11.5%.
- Where hotels source renewable electricity, the proportion of electricity from renewable sources is typically less than half of the total electricity consumed.
- Leading hotels (1.2%) source 90% or more of their electricity from renewable sources.



**Midscale and Economy categories are excluded from the chart as data is insufficient.*

Innovative practice

Percentage of Renewable Electricity



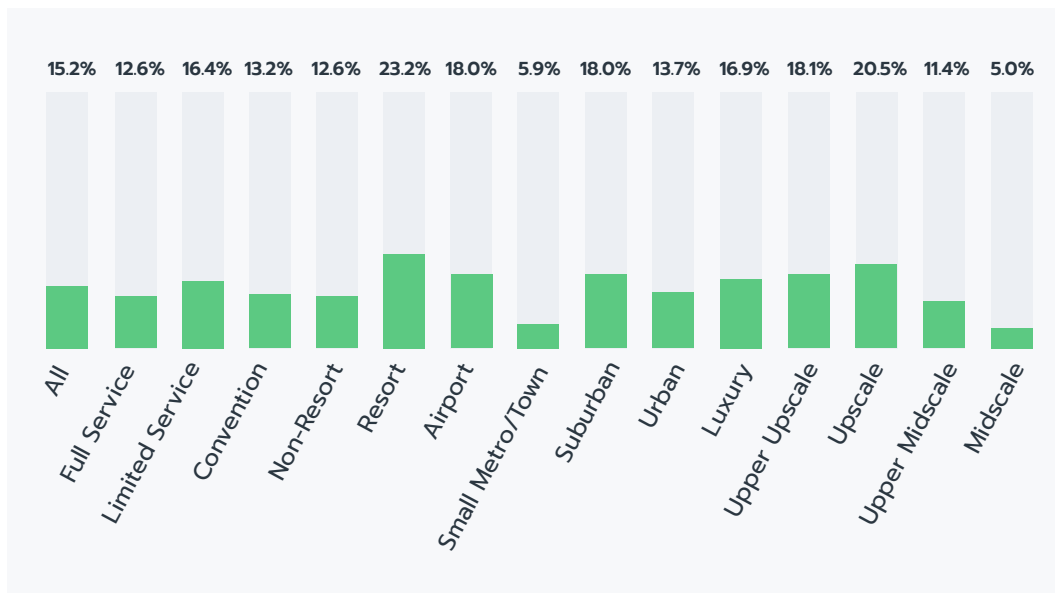
**Midscale and Economy categories are excluded from the chart as data is insufficient.*

***Responses for 0% are not included in this chart for better visualization, therefore the bars do not add up to 100%.*

→ RENEWABLE ENERGY CERTIFICATES

Hotels purchasing renewable energy from the market, such as RECs, green tariffs, feed-in tariffs, and power purchase agreements, is an innovative practice.

- 15.2% of all hotels purchase renewable energy from the market, such as RECs, green tariffs, feed-in tariffs, and power purchase agreements.
- Compared to the overall average, limited service hotels have a slightly higher uptake rate of 16.4%, while full service hotels' uptake rate is slightly lower at 12.6%.
- Resorts are the most likely to purchase RECs compared to all hotels regardless of service, property, and location types, as well as STR chain scale segments.
- Prevalence of this practice is between 13.7% and 18.0% for most location types, except for hotels in small metro and town areas where it is 5.9%.
- Across the STR chain scale segments, around one in five upscale hotels implement this practice, but only 5.0% of midscale hotels do the same.



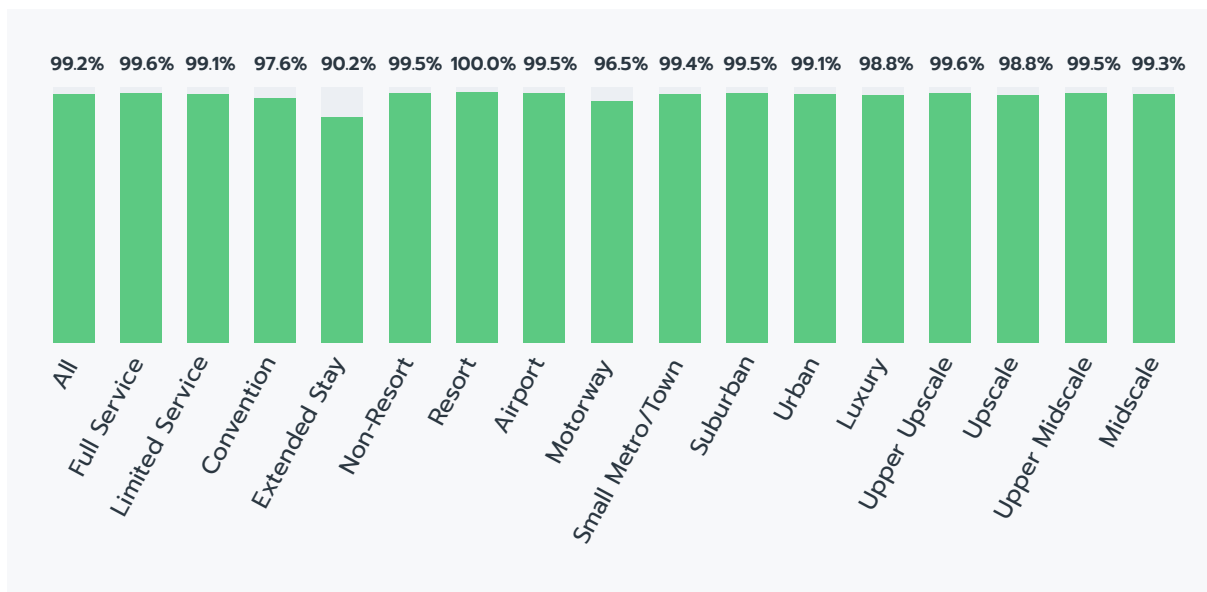
*Extended Stay, Motorway, and Economy categories are excluded from the chart as data is insufficient.

Innovative practice

→ SUSTAINABLE TRANSPORTATION

Hotels providing information and facilities/resources to encourage staff and guests to adopt sustainable transportation means is a common practice.

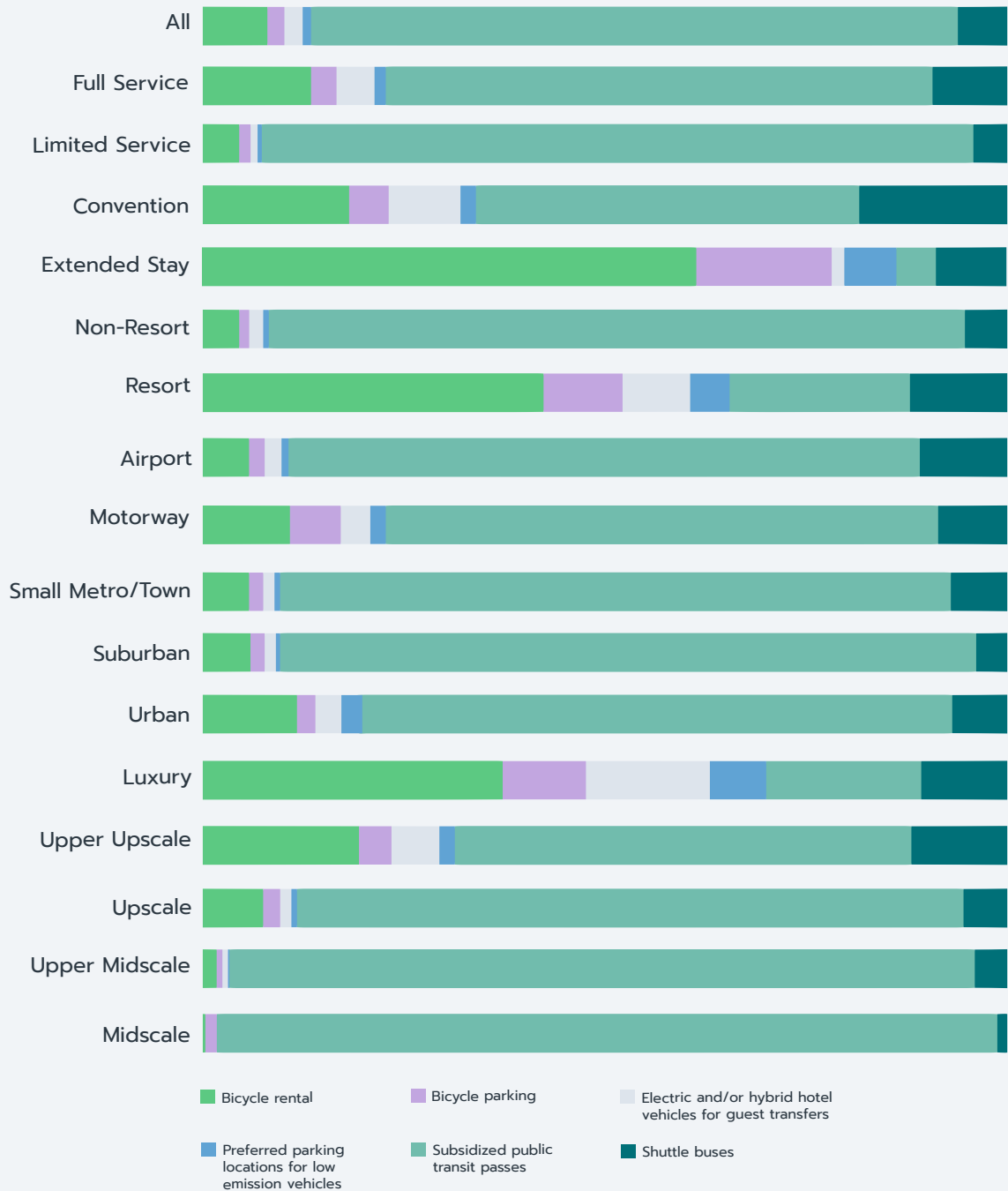
- Virtually all hotels (99.2%) have initiatives to encourage the adoption of sustainable transportation by staff and guests.
- Across all hotel types, at least 90% of hotels implement this practice.
- Subsidizing public transit passes is significantly more popular than other initiatives, which is implemented by 83.1% of all hotels. It is followed by offering bicycle rental (8.7%) and shuttle buses (7.2%).



**Economy category is excluded from the chart as data is insufficient.*

Common practice

Sustainable Transportation



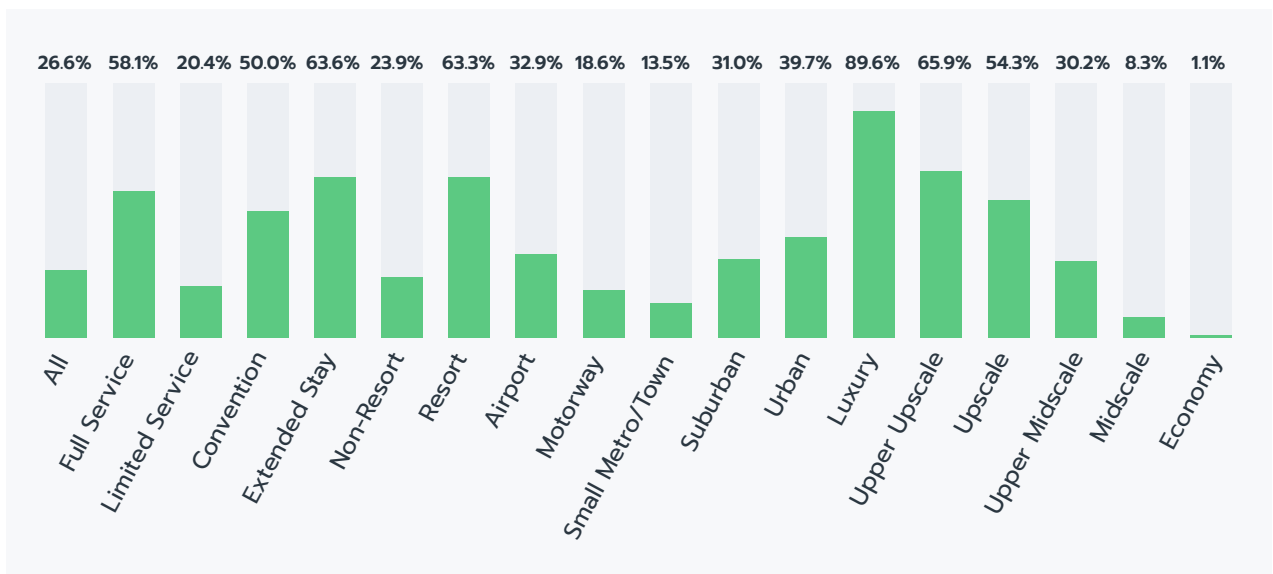
**Economy category is excluded from the chart as data is insufficient.*

***The bars do not add up to 100% because multiple initiatives can be implemented.*

→ ELECTRIC VEHICLE CHARGING STATIONS

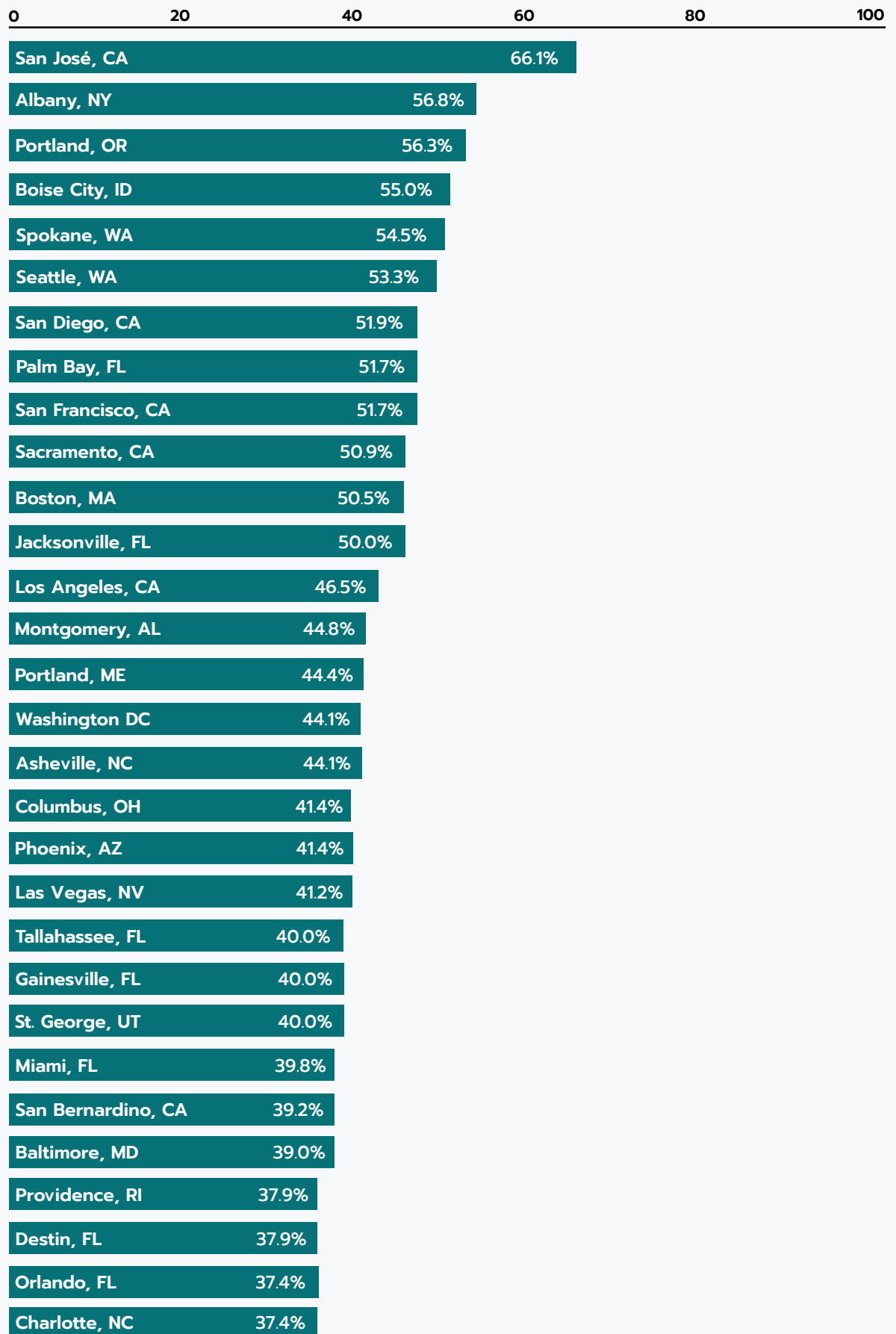
Hotels installing electric vehicle charging stations is an emerging practice.

- 26.6% of all hotels install electric vehicle charging stations on their property.
- Full service hotels (58.1%) are three times more likely to uptake this practice compared to limited service hotels (20.4%).
- This is an established practice for most property types, except for non-resorts where it is an innovative practice.
- Prevalence of this practice is between 30% to 40% for most location types, and below 20% for hotels located at motorways and small metro and town areas.
- Luxury hotels have the highest uptake rate of 89.6%, and this decreases down the STR chain scale segments.
- The top three metropolitan areas with the highest uptake rates are San Jose, CA (66.1%), Albany, NY (56.8%), and Portland, OR (56.3%).



Emerging practice

Top 30 Metropolitan Areas





Regulatory Support for Electric Vehicle Charging

To encourage the transition to sustainable transportation, the federal as well as state governments have implemented policies and incentives to purchase electric vehicles and their supporting equipment. For example, the [federal tax credit](#) - which covers up to 30 percent of equipment costs, capped at \$100,000 - is available to offset the cost of installing alternative fuelling equipment.

In addition, state governments as well as utility companies are also providing various incentives for the cause. Some examples of top performing states which have such policies include:

California (CA):

- Property Assessed Clean Energy (PACE) Loss Reserve Program allows property owners to borrow funds to pay for energy improvements, including purchasing and installing EVSE.
- PG&E's EV Fast Charge Program covers the costs and manages construction of electrical infrastructure necessary to install DC fast chargers. The program also offers a rebate of up to \$25,000 per charger for those sites located in disadvantaged communities.

Washington (WA):

- The Washington State Department of Transportation (WSDOT)'s Green Transportation Grant program provides funding to transit authorities to electrify fleets and install electric vehicle infrastructure among other green transportation projects.
- EVs and EVSE are eligible for a sales and use tax exemption. Vehicles and electric vehicle supporting equipment (EVSE) must have been purchased after Aug. 1, 2019.

Hawaii (HI):

- Hawaii Energy currently administers the EVSE Rebate Program where the public utilities commission is required to provide a rebate program incentivizing the installation and upgrading of EVSE. Rebates range depending on whether the system is being installed or upgraded. Total rebates per fiscal year are capped at \$500,000.



Regulatory Support for Electric Vehicle Charging

New York (NY):

- NYSERDA's Charge Ready NY program offers rebates to public and private entities for purchasing and installing Level 2 chargers at public parking facilities, workplaces, and multiunit dwellings. Rebates cover up to \$4,000 per port.
- Under New York Tax Law 187-b, an income tax credit is available for 50% of the cost of alternative fuelling infrastructure, up to \$5,000. Qualifying infrastructure includes EVSE. Unused tax credits may be carried over into future tax years.

Oregon (OR):

- Central Lincoln offers residential and commercial customers a one-time rebate for purchasing a Level 2 charger. To qualify, the EVSE must have been purchased on or after July 1, 2018.
- Eugene Water & Electric Board offers rebates for installing Level 2 chargers up to \$500 for residential customers and \$1,000 for commercial customers.

Florida (FL):

- Fla. Rev. Stat. § 163.08 authorizes local government to assess non-ad valorem taxes to fund qualifying improvements, including installation of EVSE. Property owners may apply for funding and enter into financing agreements with the local government to install EVSE on their property.
- Kissimmee Utility Authority offers a \$100 rebate for the purchase of an EV or installation of a home EVSE. A \$100 rebate is available on a per-vehicle basis for purchasing an EV and on a per household basis for installing home EVSE.

COMMUNITY IMPACT



→ **Strengthening the wellbeing of communities where the hotels operate is a fundamental part of being a responsible business.** Overall, it is an established practice for hotels to hire staff from the local community. The results show that hotels commonly implement initiatives to reduce inequalities. Guests are also encouraged by hotels to give back to the community, and the results show that this is a common practice. Hotels providing information on the natural and cultural heritage of the local area and appropriate tourist behavior is an established practice, and offering guided tours and activities by local guides is an emerging practice. Where wildlife interaction opportunities are offered, it is a common practice to ensure they are in line with established codes of practice. Incorporating native plant species in landscaping is an emerging practice, while having greenery on roofs is an innovative practice among hotels.

→ KEY FINDINGS

• Common practices

- Nearly all hotels country-wide (99.5%) have implemented at least one initiative that contributes to reducing inequalities.
- Nearly all hotels (98.7%) take action to ensure that wildlife interactions (if applicable) take place responsibly.
- Over 80% of hotels offer guests opportunities to support or participate in their environmental and social initiatives.

• Established practices

- More than half of all hotels provide information and interpretation about the natural and cultural heritage of the local area, as well as appropriate tourist behavior.
- About 60% of hotels hire 90% or more of their staff from the local community.

• Emerging practices

- Almost 40% of all hotels use native plant species in more than 90% of their landscaping and decoration.
- About a quarter of all hotels offer tours and activities organized by local guides and businesses.

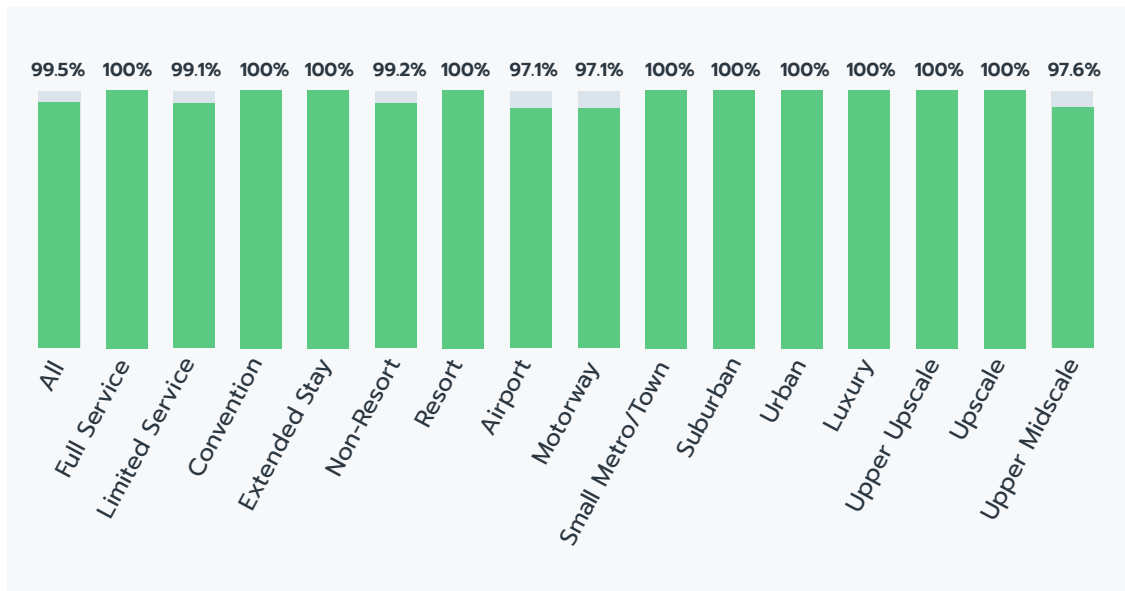
• Innovative practices

- Less than 5% of all hotels have greenery on their roofs.

→ INITIATIVES TO REDUCE INEQUALITIES

Hotels implementing initiatives to reduce inequalities is a common practice.

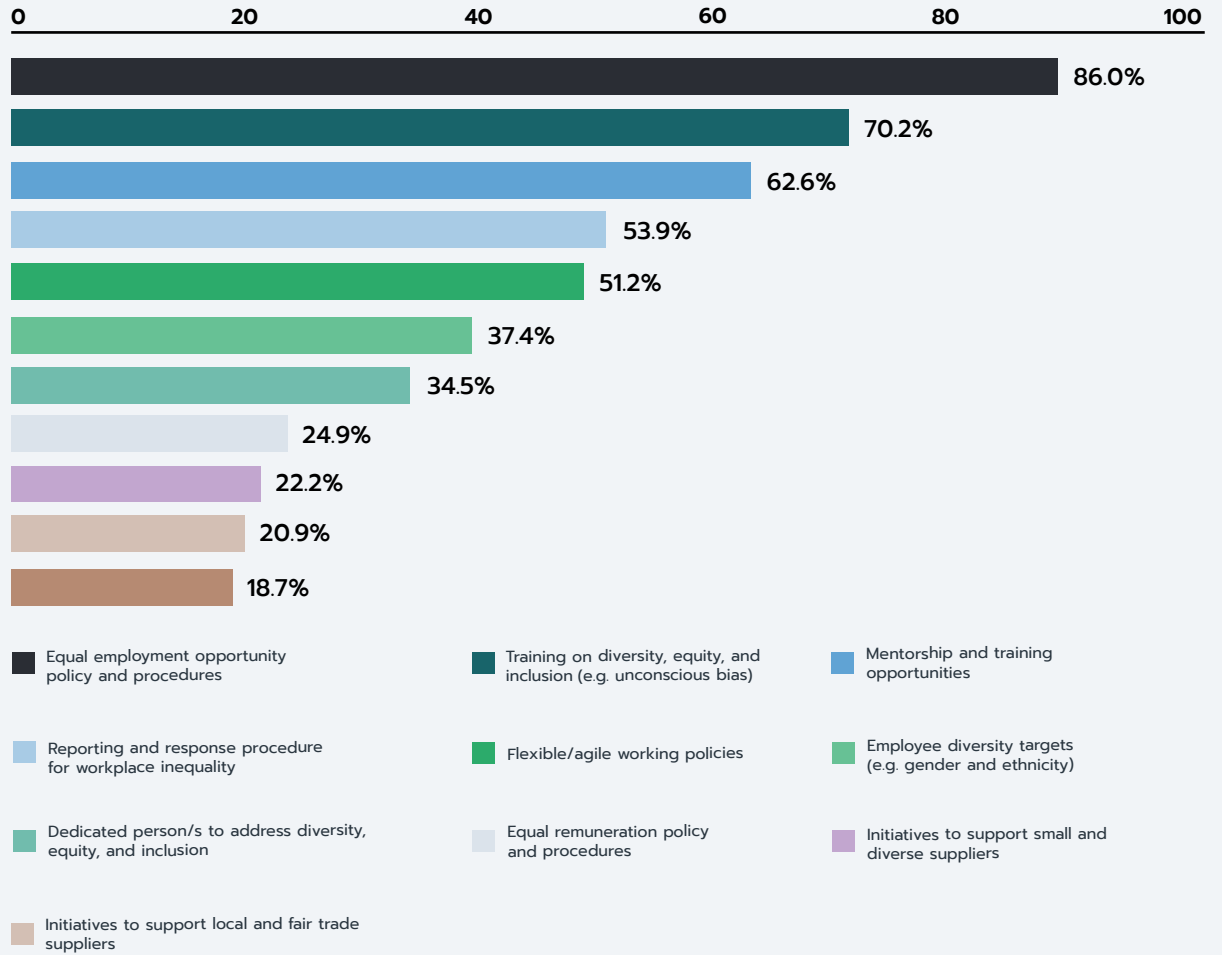
- Diversity, equity, and inclusion (DEI) is a key emerging topic for hotels, and nearly all hotels country-wide (99.5%) have implemented at least one initiative that contributes to reducing inequalities.
- This practice is adopted at a similar level across all hotels, with a range from 97.1% to 100%.
- The top three most common initiatives across all hotels are implementing equal employment opportunity policies and procedures (86.0%), providing training on DEI (70.2%), and providing mentorship and training opportunities (62.6%).
- About 35% of hotels have at least one dedicated staff to address DEI.
- At least 70% of hotels provide DEI training for employees.
- Almost 40% of hotels set targets for employee diversity (such as gender and ethnic diversity).
- More than half of hotels have procedures for reporting workplace inequality and flexible working polices.
- About a fourth of hotels have implemented equal remuneration policy and procedures, and a fifth of hotels have employee resource groups for minorities, initiatives to support small and diverse suppliers, and initiatives to support local and fair trade suppliers.



**Midscale and Economy categories are excluded from the chart as data is insufficient.*

Common practice

Initiatives to Reduce Inequalities



Regulations Promoting Diversity, Equity, and Inclusion

→ Slave-Free Business Certification Act

The Slave-Free Business Certification Act of 2022 was introduced to combat the use of forced labor in supply chains. The Act has the following implications:

- Organizations are required to disclose the measures they have implemented to eradicate forced labor, slavery, and human trafficking from their supply chains.
- Large companies that have (1) an annual revenue greater than \$500 million and (2) involvement in the mining, production, or manufacture of goods for sale, will have to undergo independent audits to ensure that forced labor and trafficking are not found in their supply chains.
- Organizations will be required to share the results of their independent audits with the Department of Labor in the form of public reports. CEOs of these organizations will have to confirm that their supply chains are free of slave labor. Should any form of forced labor be found through the independent audit, all instances will have to be reported to the Department of Labor as well.

→ Equal Pay Act

To reduce gender-biased wages, the Equal Pay Act of 1963 (Amended) is implemented across all states. The Act prohibits sex-based wage discrimination between men and women in the same establishment who perform jobs that require substantially equal skill, effort, and responsibility under similar working conditions. All forms of compensation are covered under this Act, including salary, overtime pay, bonuses, life insurance, vacation and holiday pay, cleaning or gasoline allowances, hotel accommodations, reimbursement for travel expenses, and benefits.

While all 50 states and the District of Columbia fall under the Equal Pay Act of 1963, almost all states have enacted state-wide equal pay laws, acts, and statutes. Some examples include:

- [Illinois Equal Pay Act \(IEPA\)](#)
 - The Act applies to private employer or businesses that have 100 or more employees in the State of Illinois, where they will be required to obtain an “equal pay registration certificate” and will have to recertify every two years thereafter.
 - When applying for an equal pay registration certificate, the business will have to provide an Equal Pay Compliance Statement. Among the list of statements that the business must comply with, two of them are highlighted as follows:

- *The frequency of which wages and benefits are evaluated.*
- *The approach the business takes to determine the level of wages and benefits to pay its employees; acceptable approaches include, but are not limited to, a wage and salary survey.*

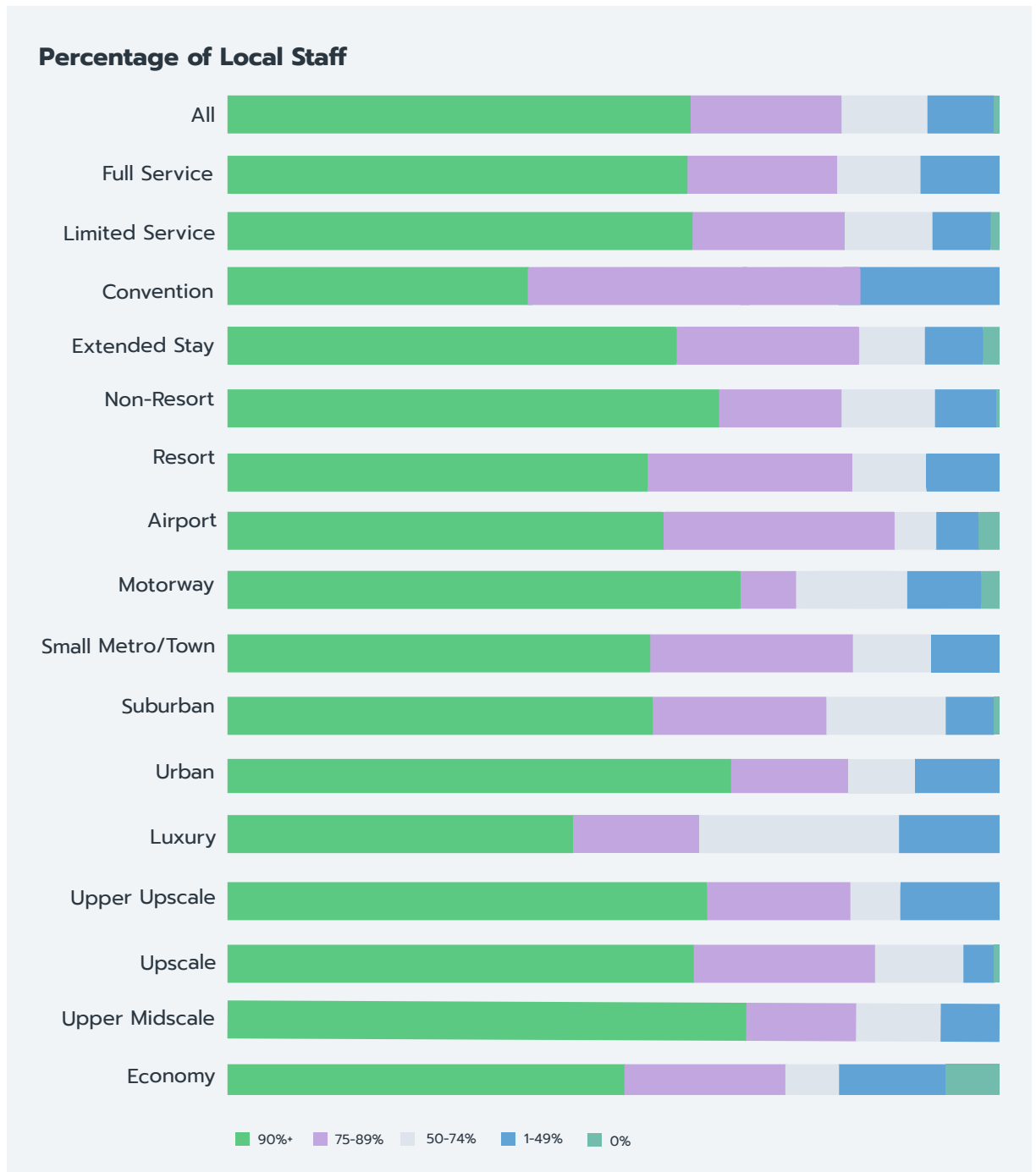
→ **Create a Respectful and Open Workplace for Natural Hair (CROWN)**

Legislation has been in place in multiple states to prohibit employers from discrimination based on hairstyles – typically those associated with African Americans. Such legislations are generally known as [CROWN laws](#). As of July 2022, over eighteen states including California, Colorado, Connecticut, Delaware, Illinois, Louisiana, Maine, Maryland, Massachusetts, Nebraska, Nevada, New Jersey, New Mexico, New York, Oregon, Tennessee, Virginia, and Washington have enacted CROWN laws.

→ LOCAL STAFF

Hotels hiring more than 90% or more of their staff from the local community is an established practice.

- About 60% of hotels hire 90% or more of their staff from the local community.
- The large majority of hotels hiring at least 90% or more staff from the local community is typical across all hotel categories.



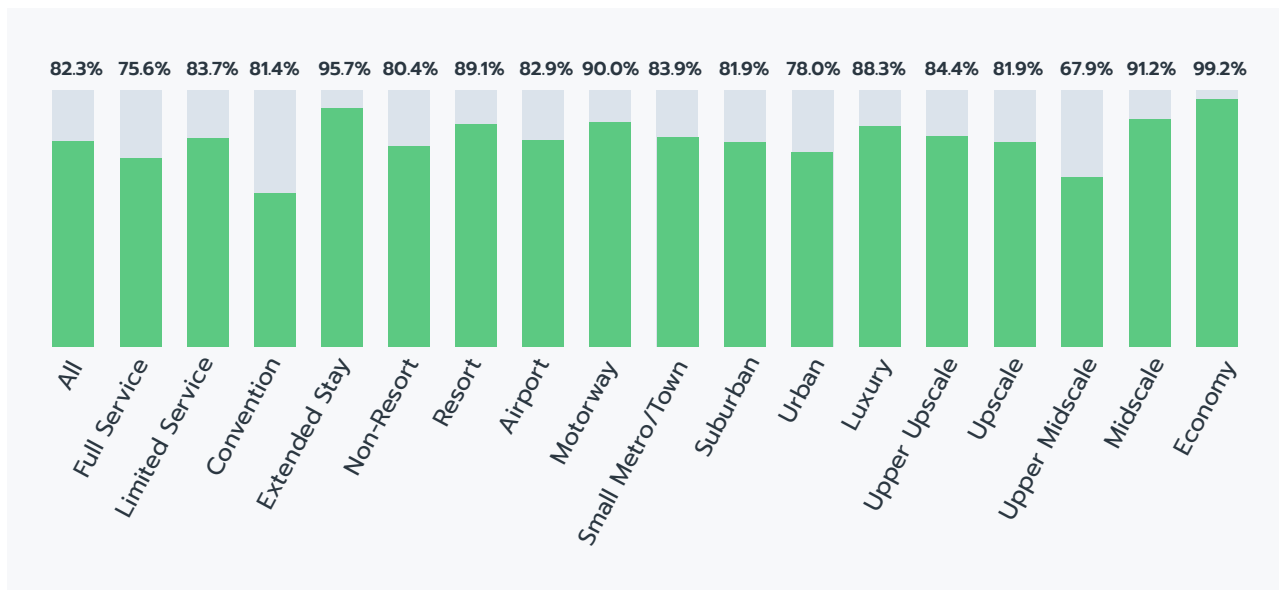
*Midscale category is excluded from the chart as data is insufficient.

Established practice (> 90% hired from local community)

→ GUEST OPPORTUNITIES

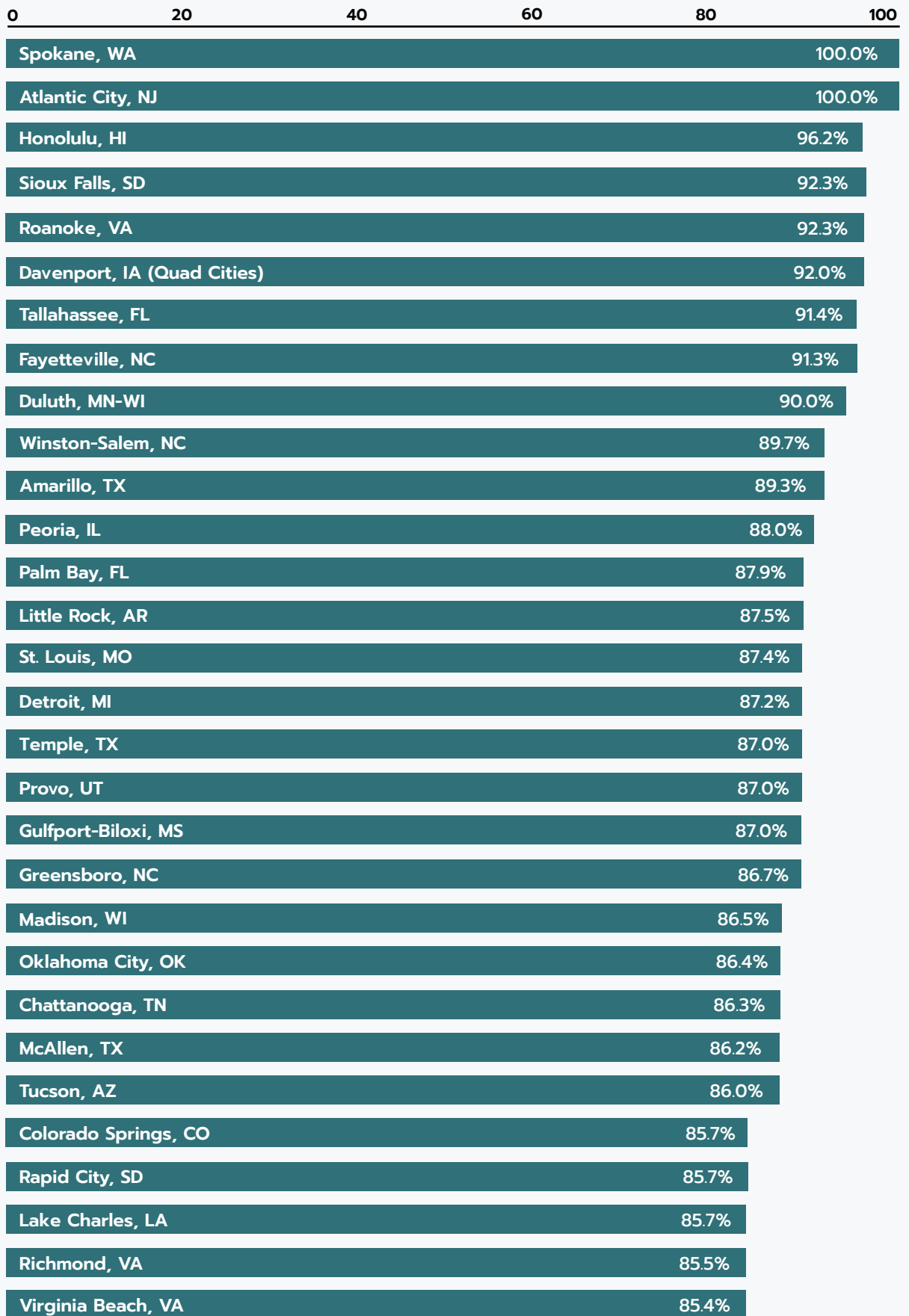
Hotels offering guests opportunities to support environmental and social initiatives is a common practice.

- Over 80% of hotels offer guests opportunities to support or participate in their environmental and social initiatives.
- The prevalence rate for limited service hotels (83.7%) is comparable to the country-wide average, while full service hotels fall slightly behind (75.6%).
- Across property and location types, the prevalence rate is at least 80%, with the exception of urban (78%).
- Economy hotels outperformed all other hotels with 99.2% prevalence rate, while upper midscale hotels have the lowest prevalence rate of 67.9%.
- The three metropolitan areas with the highest prevalence rate are Spokane, WA (100.0%), Atlantic City, NJ (100.0%), and Honolulu, HI (96.2%).



Common practice

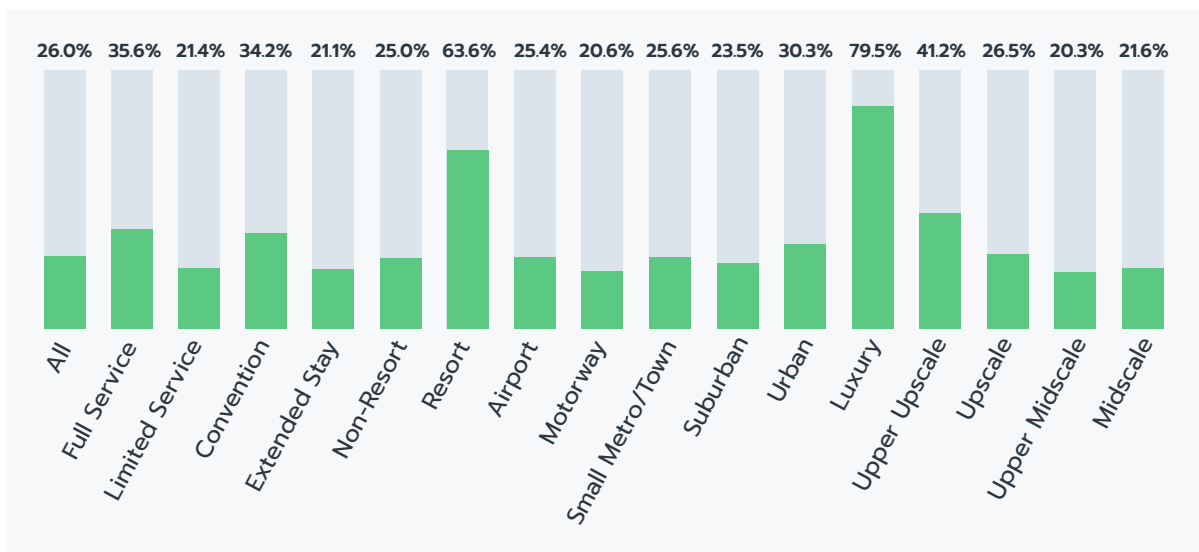
Top 30 Metropolitan Areas



→ TOURS AND ACTIVITIES BY LOCALS

Hotels offering tours and activities organized by local guides and businesses is an emerging practice.

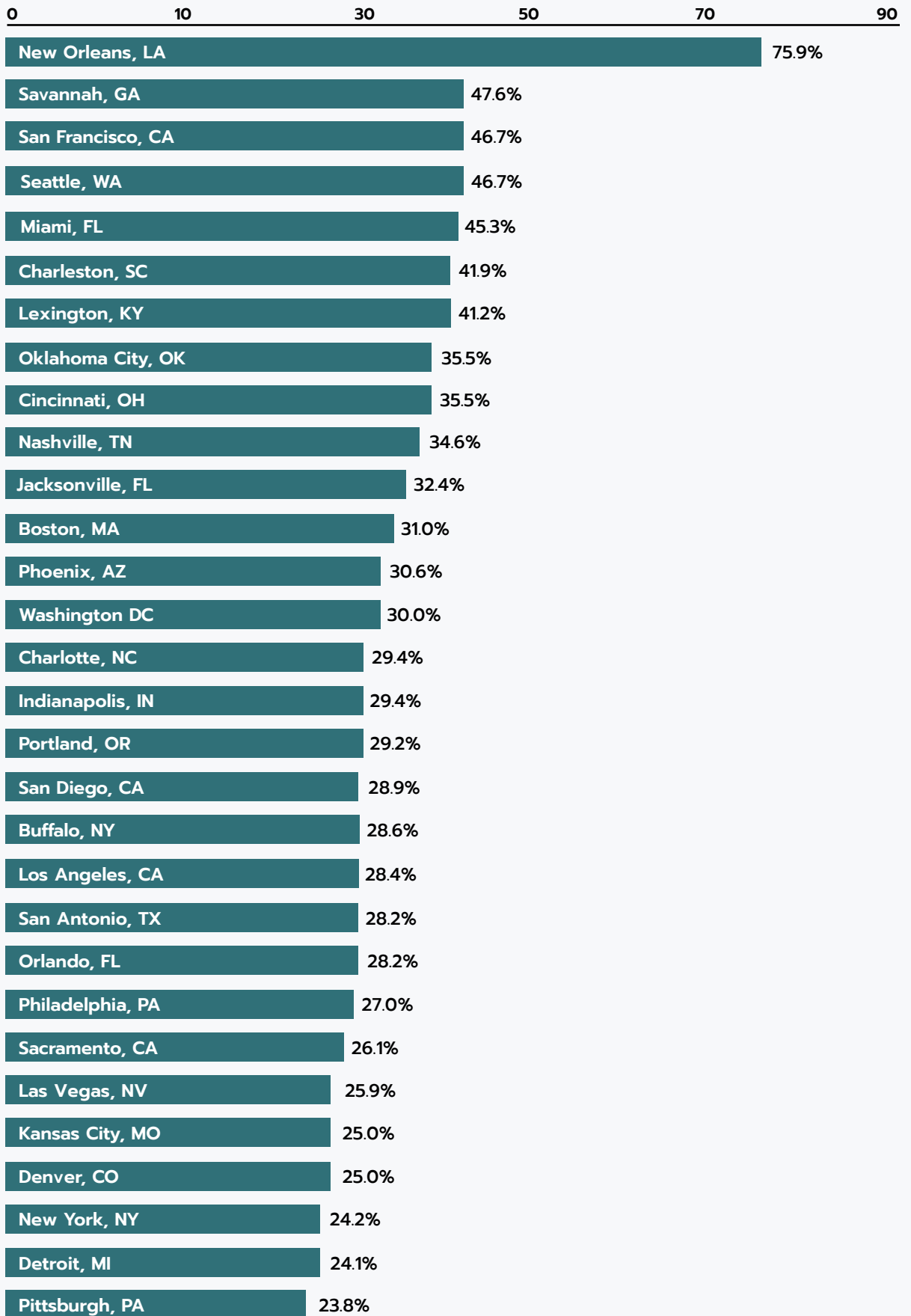
- About a quarter of all hotels offer tours and activities organized by local guides and businesses.
- The prevalence rate for full service hotels (35.6%) is slightly higher than that of limited service hotels (21.4%).
- Prevalence rates across property and location types are similar to the country-wide prevalence rate, except for resorts which log almost thrice of the country-wide rate.
- The prevalence rate of this practice increases across the STR chain scale segments, with luxury hotels being almost four times more likely to offer tours and activities by locals compared to midscale hotels.
- The top three metropolitan areas that are the most likely adopt this practice are New Orleans, LA (75.9%), Savannah, GA (47.6%), and San Francisco, CA (46.7%).



*Economy category is excluded from the chart as data is insufficient.

Emerging practice

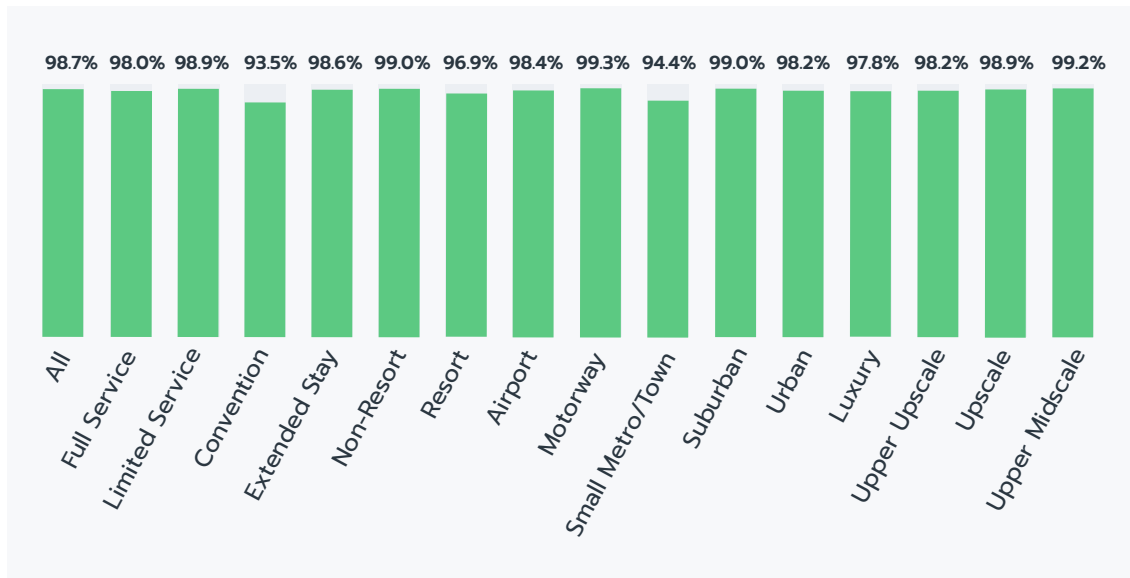
Top 30 Metropolitan Areas



→ WILDLIFE INTERACTIONS

Hotels offering guests opportunities to support environmental and social initiatives is a common practice.

- Nearly all hotels (98.7%) take action to ensure that wildlife interactions (if applicable) take place responsibly.
- Prevalence is high regardless of service, property, and location type, ranging between 93.5% to 99.3%.



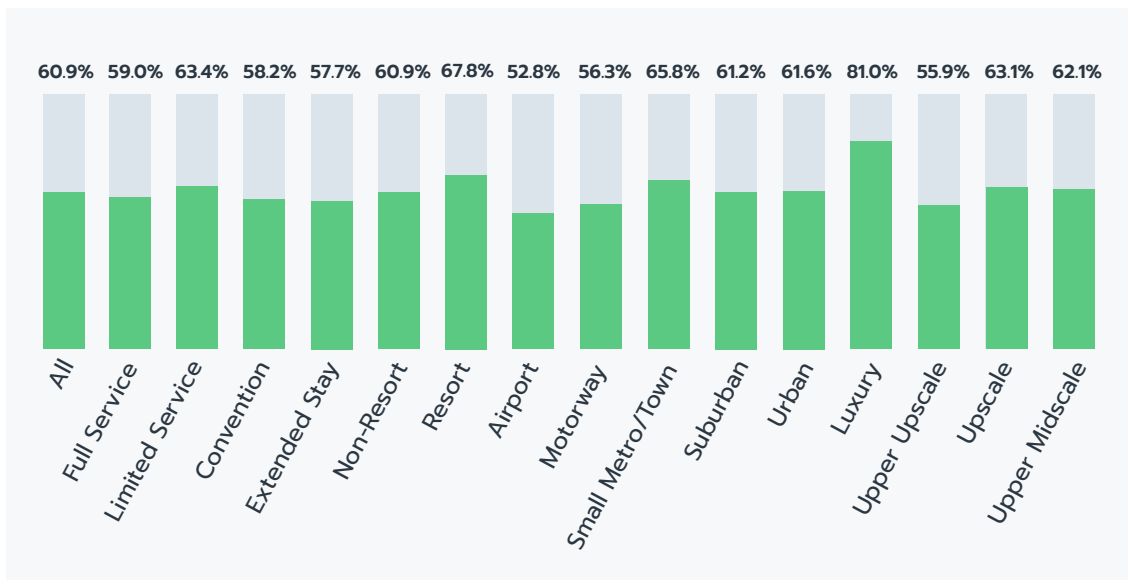
**Midscale and Economy categories are excluded from the chart as data is insufficient.*

Common practice

→ LOCAL HERITAGE OFFERINGS

Hotels providing accurate information and interpretation to guests and staff about local natural habitats and places of historical, archaeological, cultural, and spiritual importance, as well as appropriate behavior in these places, is an established practice.

- More than half of all hotels provide information and interpretation about the natural and cultural heritage of the local area, as well as appropriate tourist behavior.
- Full service and limited service hotels have prevalence rates that are comparable to the country-wide average, at 59.0% and 63.4% respectively.
- Regardless of property type, location type, and STR chain scale segment, the prevalence rate falls within 10 percentage points of country-wide prevalence.
- The only exception being luxury hotels, which have the highest prevalence rate (81.0%).



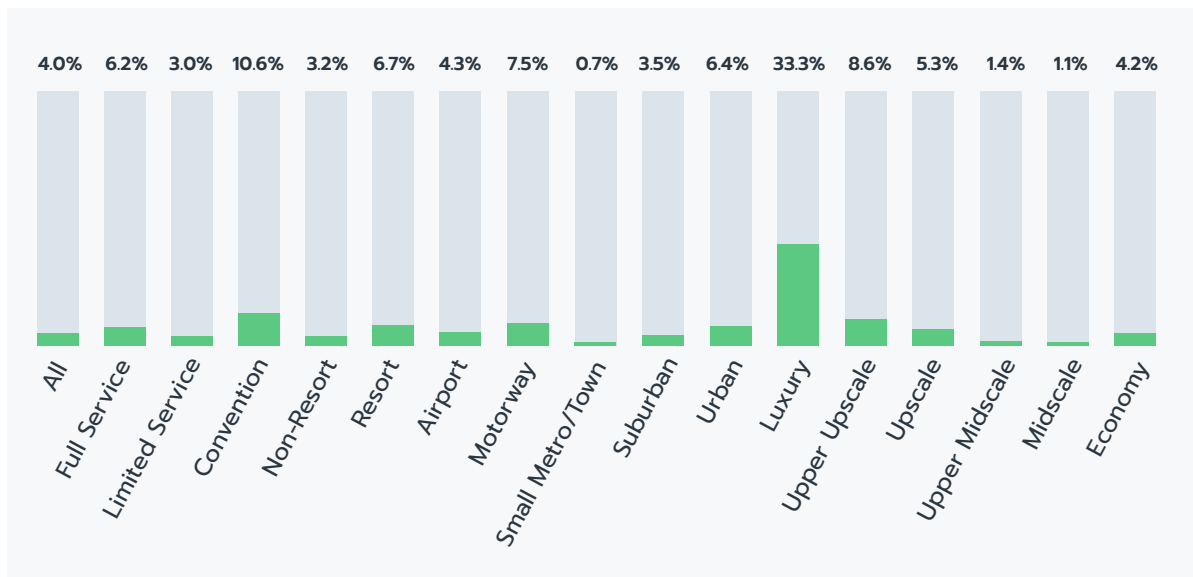
**Midscale and Economy categories are excluded from the chart as data is insufficient.*

Established practice

→ GREEN ROOFS

Hotels having green roofs (i.e., roofs with vegetation such as plants and trees) is an innovative practice.

- Less than 5% of all hotels have greenery on their roofs.
- Across property types, location, and STR chain scale segment, hotels generally have a prevalence rate falling below 10%.
- Luxury hotels (33.3%) are an exception as they have prevalence rates eight times that of the country-wide average.



*Extended Stay category is excluded from the chart as data is insufficient.

Innovative practice



Chicago Marriott Downtown Magnificent Mile, Chicago

There is a beautiful rooftop garden on the ninth-floor of this hotel, which uses compost that is made from food waste from the hotel. This garden is also home to four honeybee hives which improves urban biodiversity.

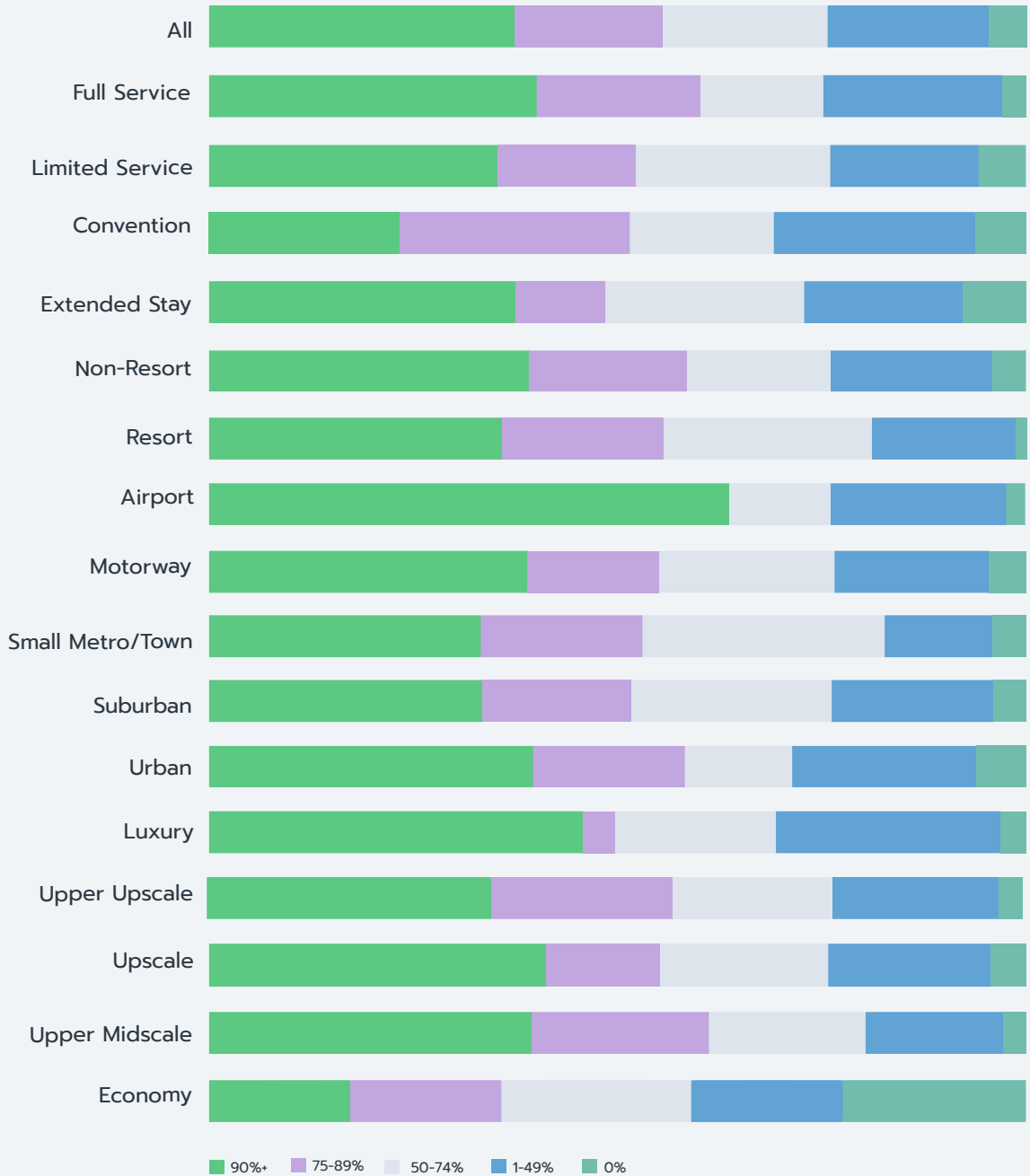


→ NATIVE PLANTS

Hotels incorporating native plant species in more than 90% of their landscaping and decoration is an emerging practice.

- Almost 40% of all hotels use native plant species in more than 90% of their landscaping and decoration.
- When native plant species are used, they typically make up at least half of the hotel's landscaping needs, regardless of hotel service type, property type, location type, and STR chain scale segment.
- Across all categories, the proportion of hotels with 1-49%, 50-74%, and 75-89% of landscaping made up of native plant species are about the same.
- The proportion of hotels that do not use native plant species in their landscaping is the highest among economy hotels (22.7%), while this percentage falls below 10% for all other hotel types.

Percentage of Native Plants in Landscaping



*Midscale category is excluded from the chart as data is insufficient.

Emerging practice (> 90% of plants are native to the region)

MANAGEMENT SYSTEM



→ **Key driving factors of an effective management system include having dedicated staff for sustainability, routine sustainability meetings, staff empowerment with training and resources, and processes to incorporate staff and guest feedback for improving sustainability practices.** As hotels advance on their sustainability journey, more hotels are seeking third-party certifications to validate their efforts. Overall, two out of the nine identified practices are common practices. Nearly all hotels have feedback channels for staff and guests to improve service and sustainability. There is one established practice, which is holding sustainability meetings at least once a month. Two practices are emerging practices, namely having a sustainability champion and conducting staff training on sustainability. Three practices fell short—only about 2% of all hotels have a sustainability team, less than one-fifth have budget for sustainability related initiatives, and one-tenth have sustainability certified operations.

→ KEY FINDINGS

- **Common practices**

- Virtually all hotels (99.2%) collect feedback from guests to improve service and sustainability.
- Nearly all hotels country-wide (95.5%) have channels in place to collect feedback from staff.

- **Established practices**

- Around half of all hotels hold sustainability meetings at least once every month.

- **Emerging practices**

- Hotels having a sustainability champion (a person charged with overseeing sustainability initiatives) on property is an emerging practice.
- Around two-fifths of hotels conduct sustainability related trainings for staff.

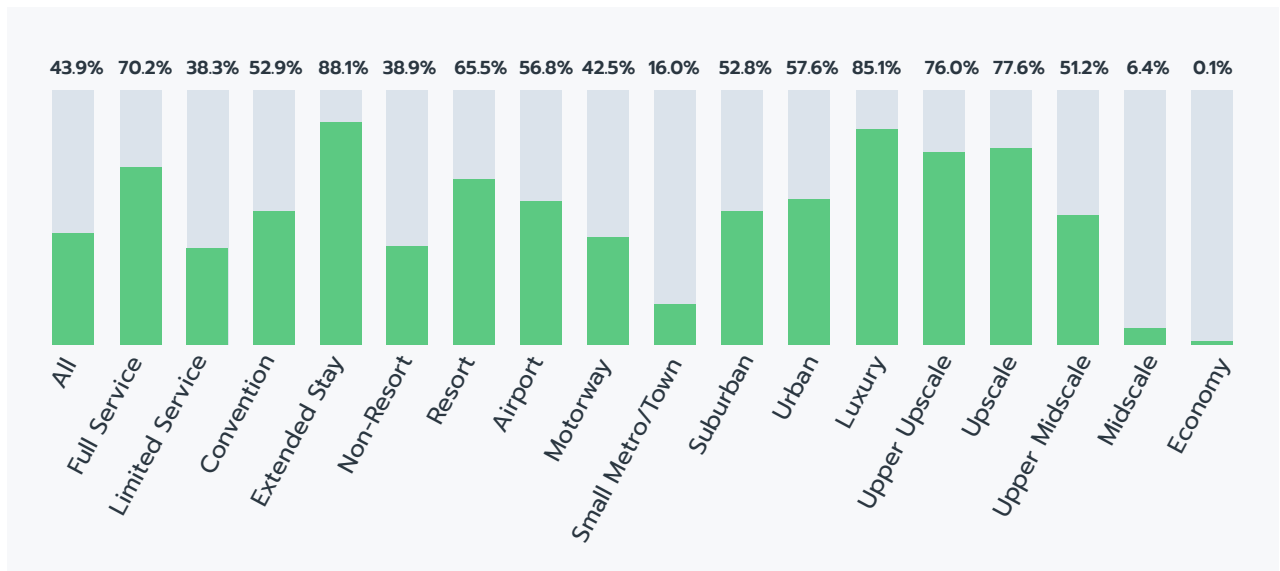
- **Innovative practices**

- Almost one-fifth of all hotels have a dedicated sustainability budget.
- A tenth of all hotels are third-party certified for sustainability.
- 2.1% of hotels have a sustainability team on the property.

→ SUSTAINABILITY CHAMPION

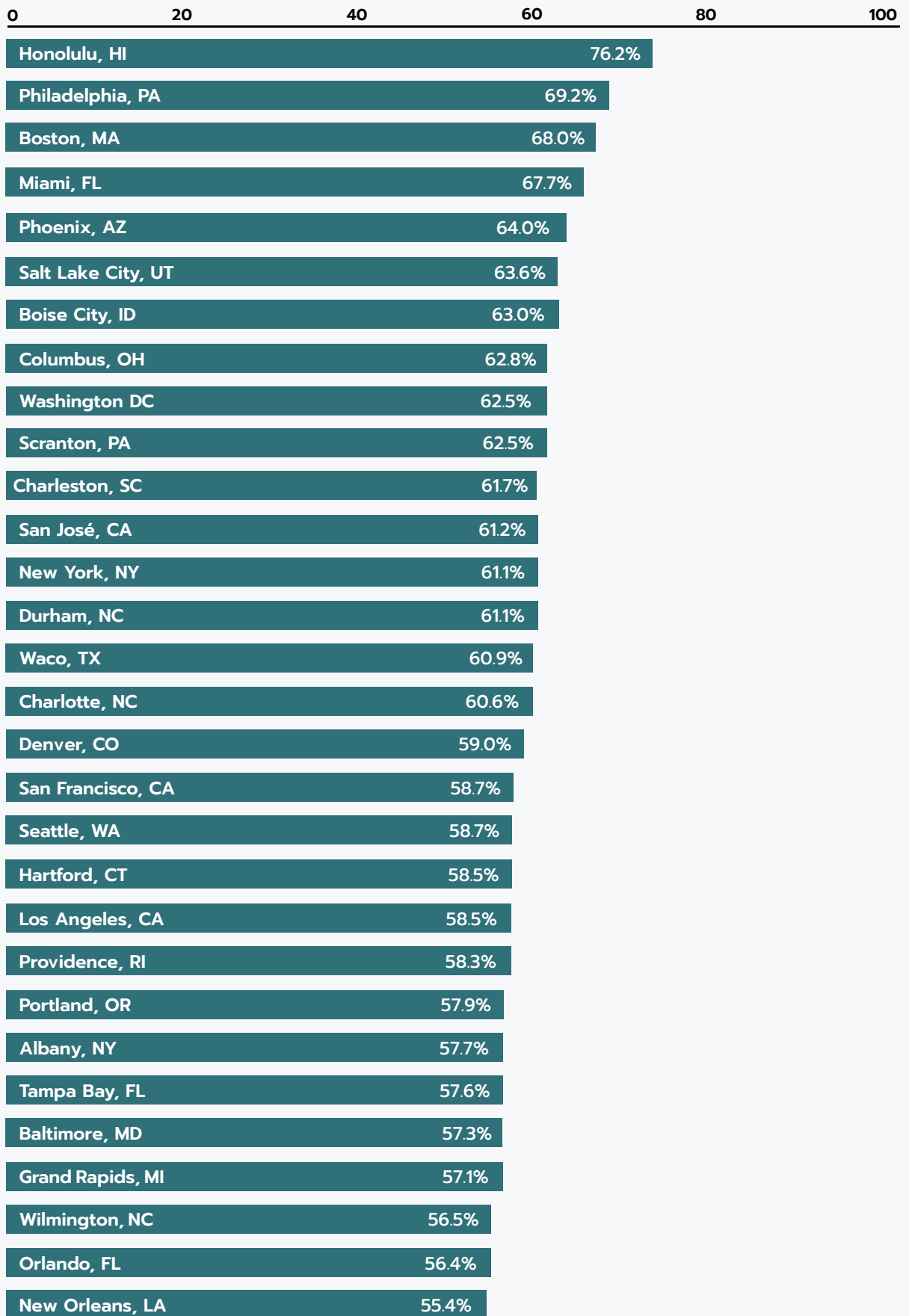
Hotels having a sustainability champion (a person charged with overseeing sustainability initiatives) on property is an emerging practice.

- 43.9% of hotels have a sustainability champion on property.
- The proportion of full service hotels that have a sustainability champion is twice as much (70.2%) compared to limited service hotels (38.3%).
- Over 75% of upscale, upper upscale, and luxury hotels have a sustainability champion, while less than 10% of midscale and economy hotels do.
- Extended stays have the highest proportion of hotels with a sustainability champion, at nearly 90%.
- The top metropolitan areas which are the most likely to have a sustainability champion are Honolulu, HI (76.2%), Philadelphia, PA (69.2%), and Boston, MA (68.0%).



Emerging practice

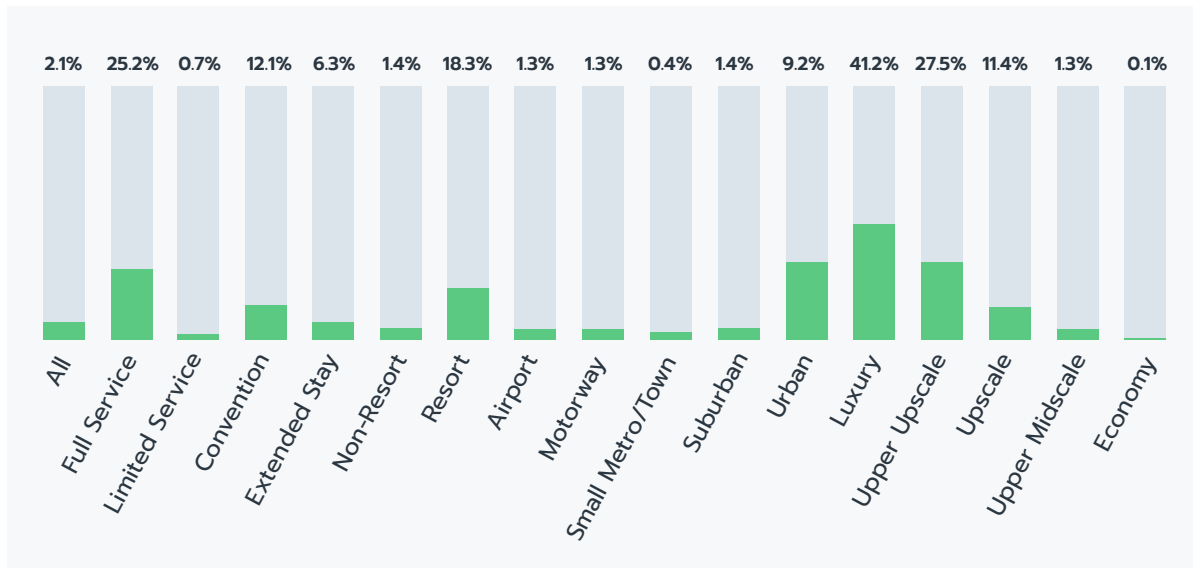
Top 30 Metropolitan Areas



→ SUSTAINABILITY TEAM

Hotels having a sustainability team on property is an innovative practice.

- 2.1% of hotels have a sustainability team on the property.
- A quarter of full service hotels have sustainability teams, while less than 1% of limited service hotels do.
- Almost one-fifth of resorts have sustainability teams. In contrast, less than a tenth of extended stays and non-resorts have sustainability teams.
- Less than a tenth of hotels, regardless of location, have sustainability teams.
- Luxury hotels are more likely to have sustainability teams (41.2%), followed by upper upscale hotels (27.5%). About a tenth or less of hotels in the remaining STR scale chain segments have sustainability teams.



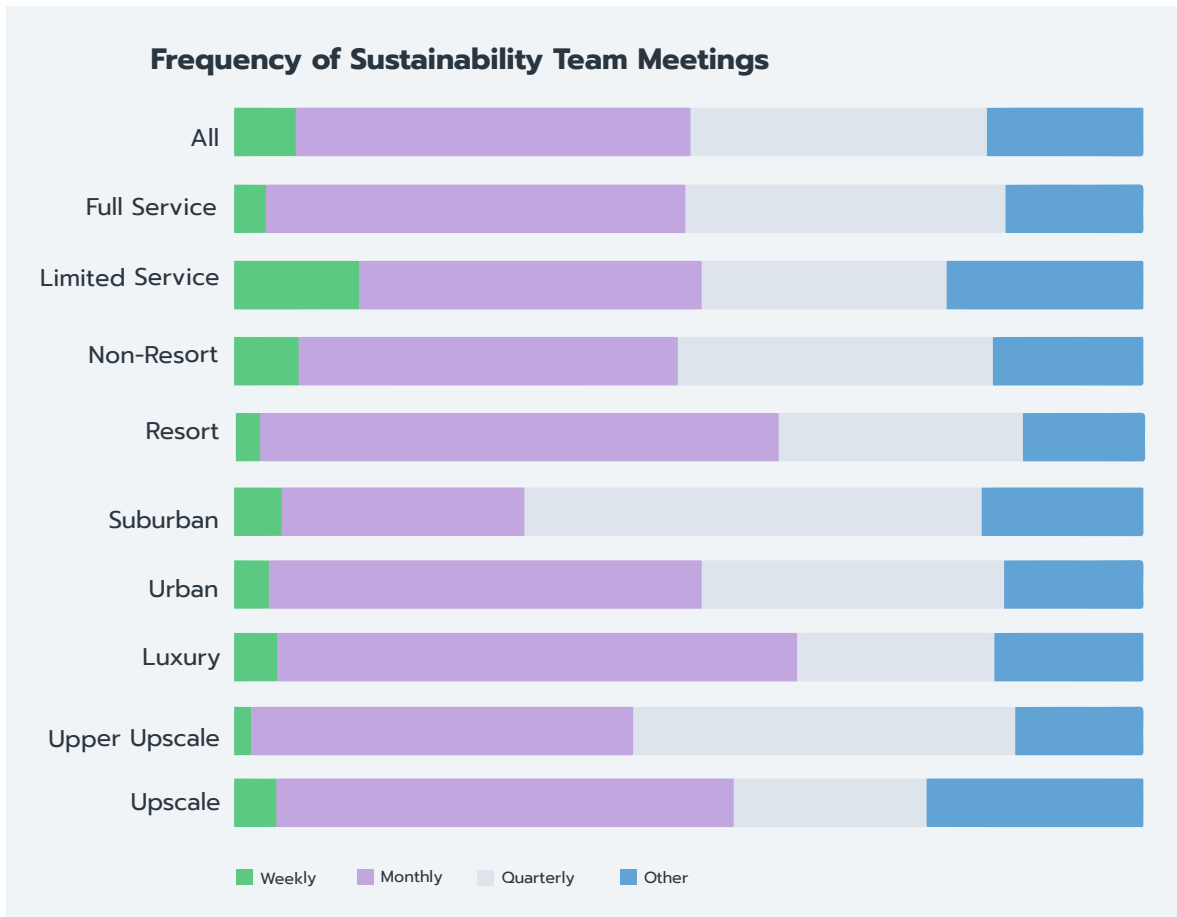
*Midscale category is excluded from the chart as data is insufficient.

Innovative practice

→ SUSTAINABILITY TEAM MEETINGS

Hotels conducting sustainability meetings at least once a month is an established practice.

- Around half of all hotels hold sustainability meetings at least once every month.
- Across the STR chain scale segments, more than 50% of luxury and upscale hotels hold sustainability meetings at least once a month.



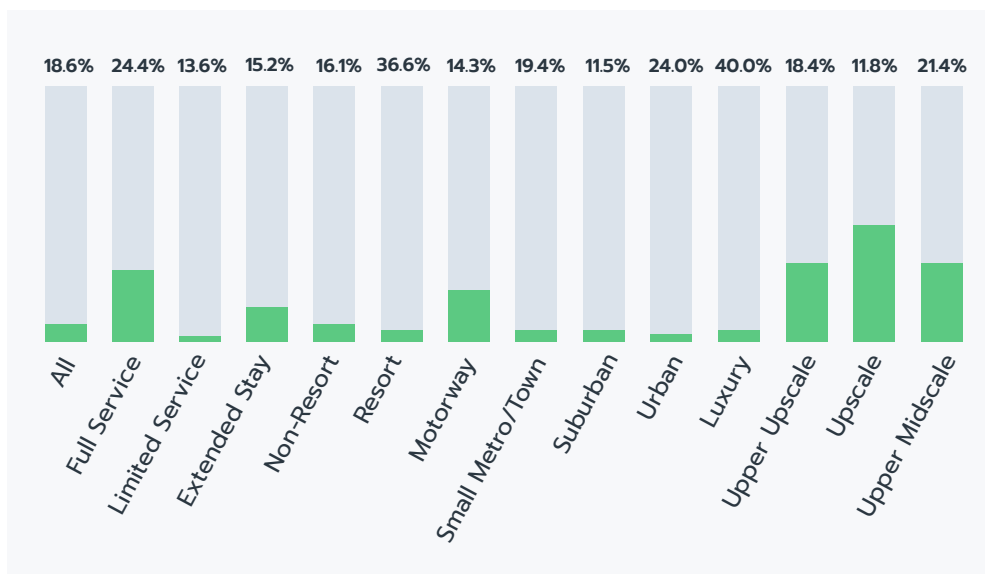
*Convention, Extended Stay, Airport, Motorway, Small Metro/Town, Upper Midscale, Midscale, and Economy categories are excluded from the chart as data is insufficient.

Established practice (meeting at least once a month)

→ SUSTAINABILITY BUDGET

Sustainability teams having a budget to implement sustainability initiatives on the property is an innovative practice.

- Almost one-fifth of all hotels have a dedicated sustainability budget.
- About one quarter of full service hotels have a budget. The prevalence rate is almost twice as much as that of limited service hotels (13.6%).
- Across hotel types, locations, and STR chain scale segments, resorts (36.6%) and luxury hotels (40.0%) are the most likely to have sustainability budgets.
- All other hotels performed around the overall average of 18.6%.



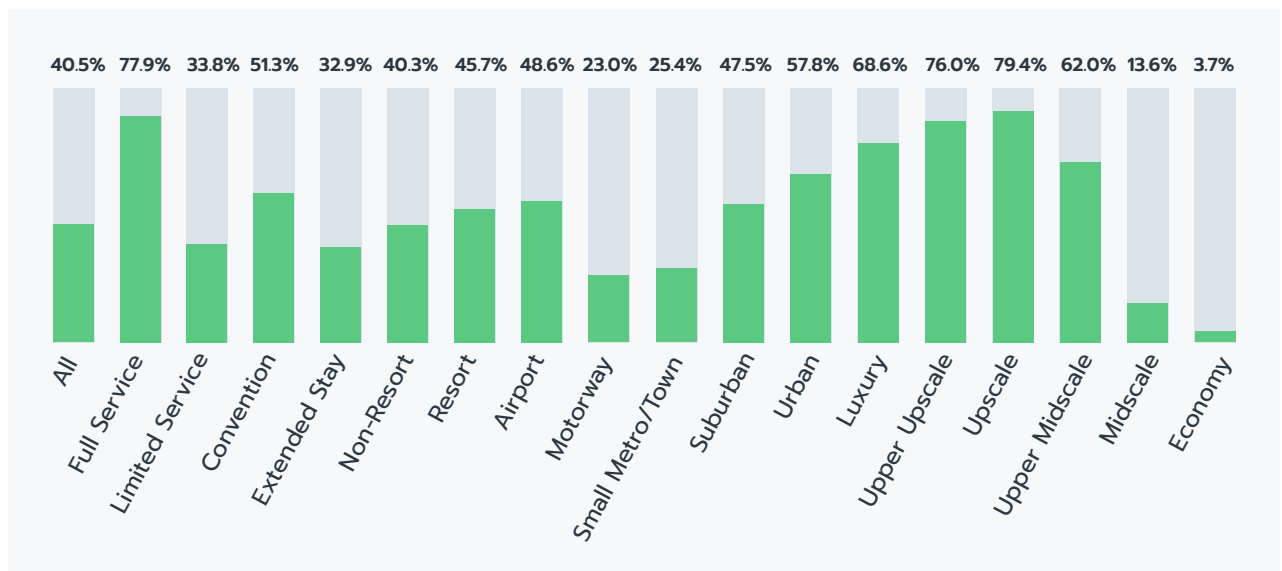
**Convention, Airport, Midscale, and Economy categories are excluded from the chart as data is insufficient.*

Innovative practice

→ SUSTAINABILITY TRAINING

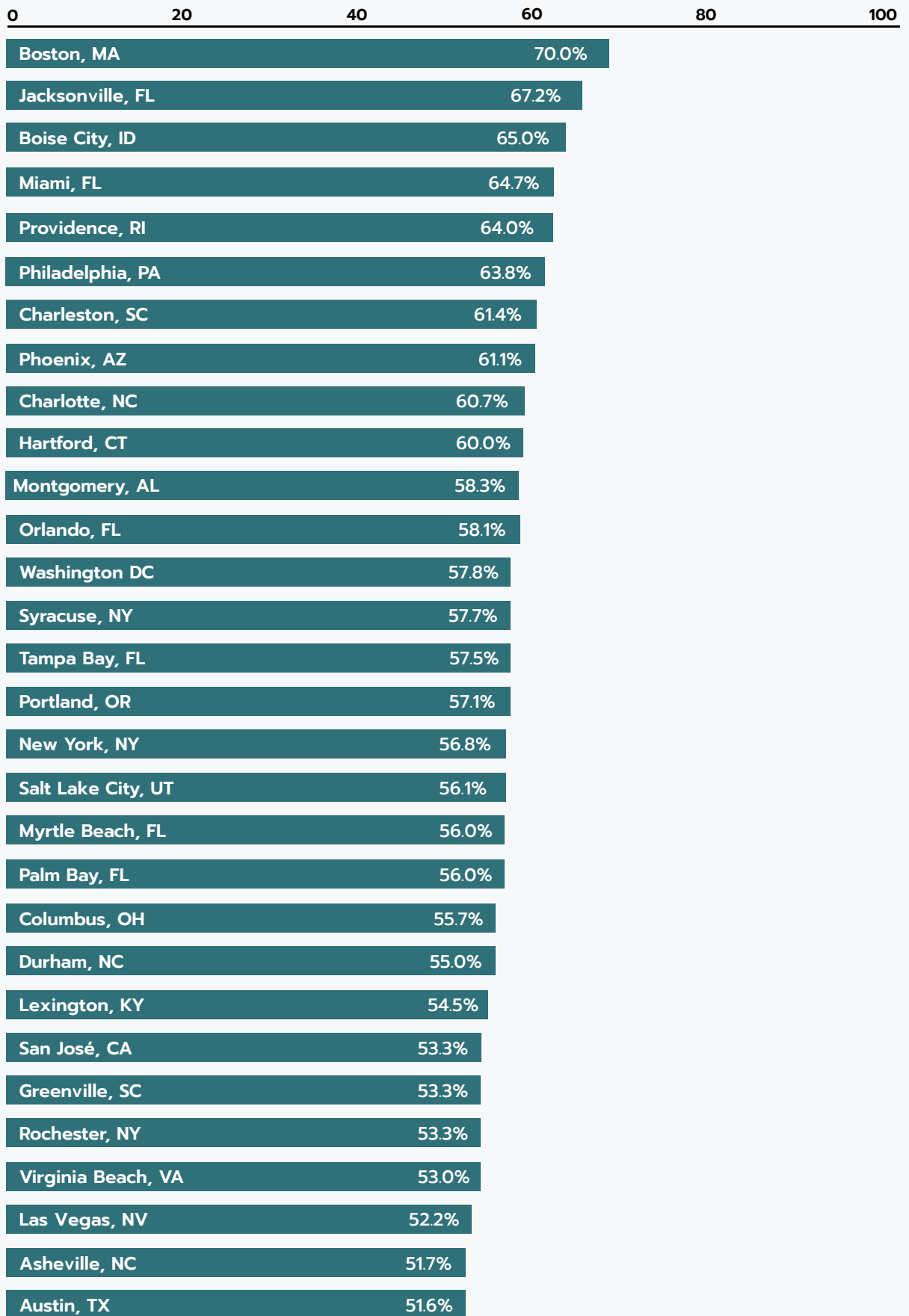
Hotels providing staff training (at least once a year) on understanding and implementing sustainable practices for front of and back of house staff is an emerging practice.

- Around two-fifths of hotels conduct sustainability related trainings for staff
- Sustainability trainings are a common practice among full service hotels (77.9%), while it is an emerging practice among limited service hotels (33.8%).
- Half of all convention hotels conduct such trainings, while over 40% of non-resorts and resorts do the same.
- At least 45% of airport, suburban, and urban hotels conduct sustainability trainings.
- Nearly 80% of upscale hotels conduct sustainability training, slightly higher than that of upper upscale and luxury hotels. In contrast, less than a tenth of economy hotels conduct such trainings.
- The top three metropolitan areas for this practice are Boston, MA (70.0%), Jacksonville, FL (67.2%), and Boise City, ID (65.0%).



Emerging practice

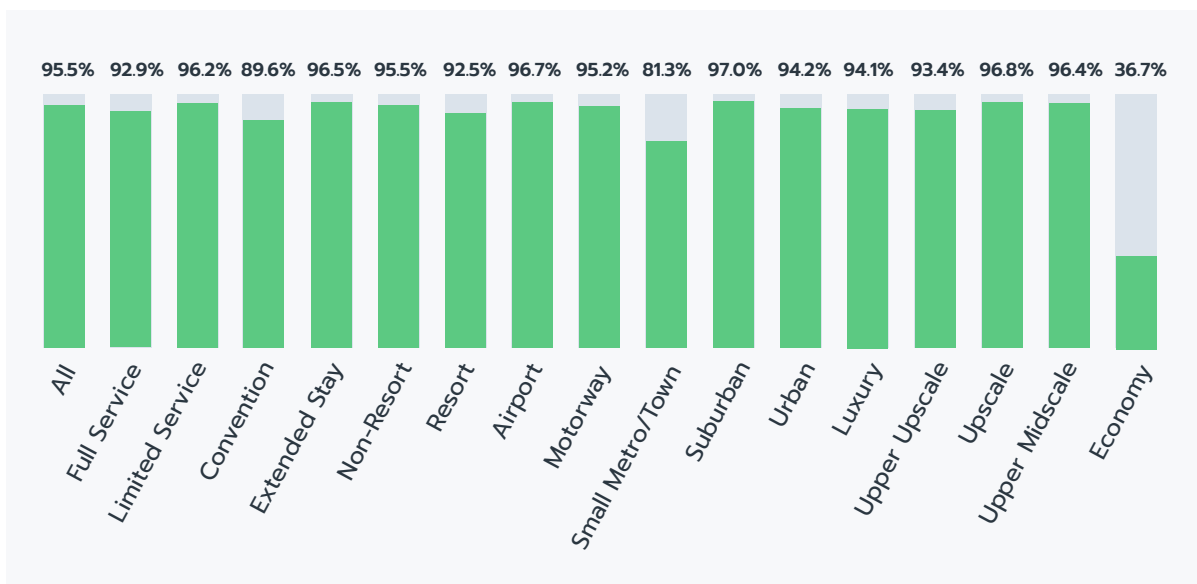
Top 30 Metropolitan Areas



→ STAFF FEEDBACK

Hotels collecting staff feedback and suggestions for sustainability is a common practice.

- Nearly all hotels country-wide (95.5%) have channels in place to collect feedback from staff.
- Regardless of hotel type, location, and STR chain scale segment, at least 80% of hotels collect sustainability feedback from staff.
- The only exception is that of economy hotels, where only 36.7% of hotels have such feedback channels for staff in place.

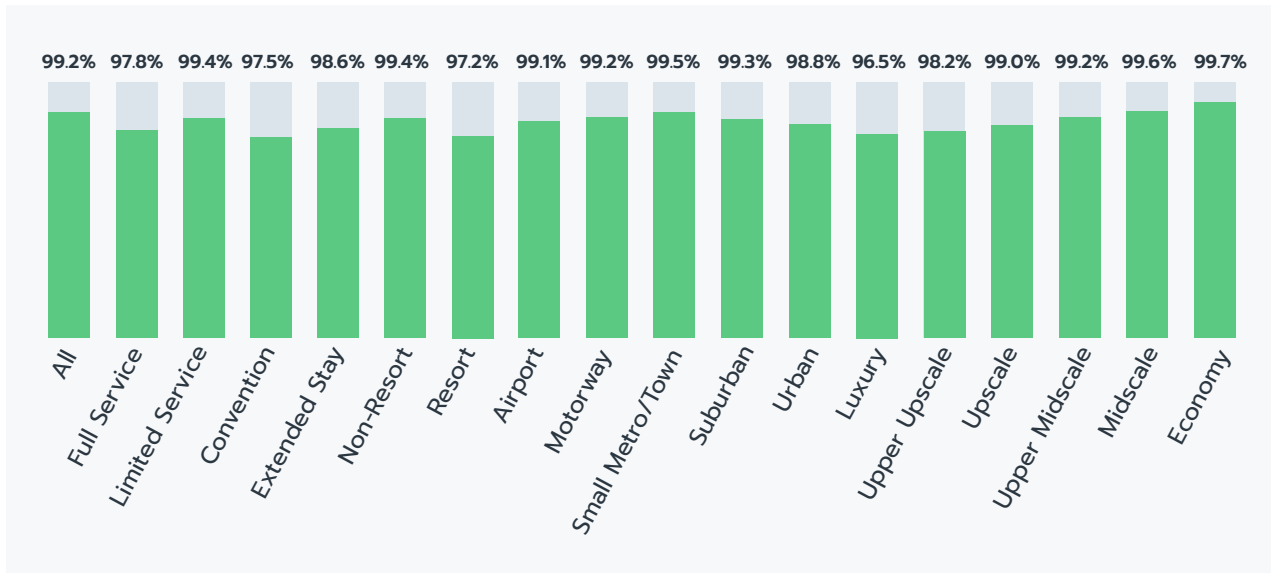


Common practice

→ GUEST FEEDBACK

Hotels collecting guest feedback to assess guest satisfaction levels and improve service and sustainability is a common practice.

- Virtually all hotels (99.2%) collect feedback from guests to improve service and sustainability.
- This is regardless of service, property, and location types, as well as STR chain scale segment.

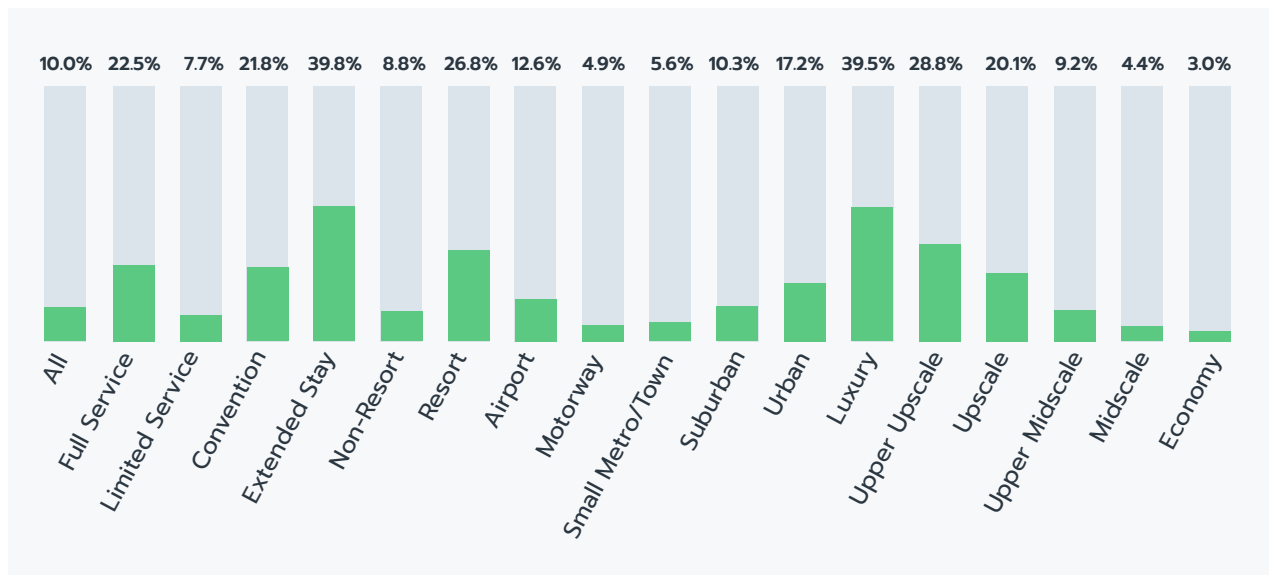


Common practice

→ HOTEL SUSTAINABILITY CERTIFICATIONS

Hotels attaining third-party certifications for operational sustainability is an innovative practice.

- A tenth of all hotels are third-party certified for sustainability.
- Nearly one quarter of full service hotels have sustainability certifications.
- Nearly 40% of extended stay hotels have certified sustainable operations, this is followed by resorts (26.8%) and convention hotels (21.8%).
- Urban hotels have the highest prevalence (17.2%) of certified sustainable operations among the location types.
- The proportion of hotels with sustainability certifications increases across the STR chain scale segments, from economy (3.0%) to luxury (39.5%).



Innovative practice

10

HEALTH AND WELLNESS



→ **The Covid pandemic has accelerated the prevalence of health and wellness-related best practices.** There were six best practices assessed under health and wellness. Five out of the six practices are common practices. Nearly all hotels are using low- or zero-Volatile Organic Compound (VOC) paints and conducting hygiene audits. The next two most prevalent practices are using environmentally friendly pest control and offering bathroom amenities free of harmful chemicals with about four in five hotels practicing these. More than three-quarters of all hotels have an air purification system or offer portable air purification devices. The one practice that falls short, as an established practice, focuses mainly on protecting staff health using green cleaning products.

→ KEY FINDINGS

- **Common practices**

- Virtually all hotels use low- or zero-VOC paints (98.1%).
- Nearly all hotels (96.3%) conduct audits against hygiene standards.
- 83.9% of all hotels use environmentally friendly pest control.
- Four in five of all hotels offer wet bathroom amenities (e.g., shampoo and shower gel) that are free of harmful chemicals to guests.
- More than three-quarters of all hotels have an air purification system or offer portable air purifiers.

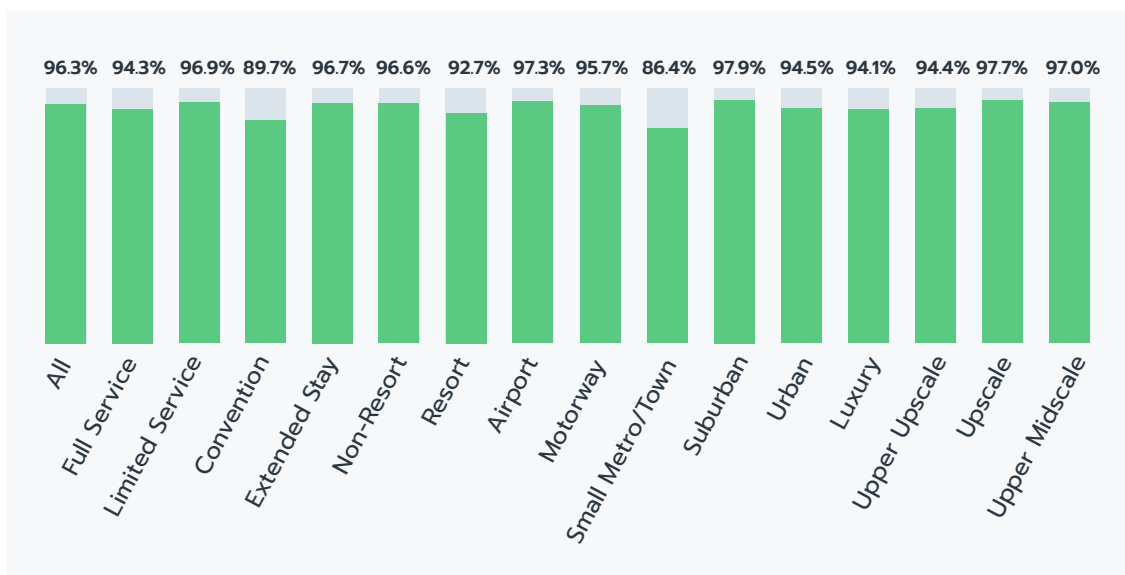
- **Established practices**

- 63.2% of all hotels use green cleaning products.

→ HYGIENE AUDITS

Hotels undertaking audits against hygiene standards is a common practice.

- Nearly all hotels (96.3%) conduct audits against hygiene standards.
- This is a common practice across most hotels, regardless of service, property, and location types, as well as STR chain scale segment.
- Although it is a common practice, the uptake rate of this practice at convention hotels (89.7%) and hotels in small metro and town areas (86.4%) are lower than the national average.
- As a first step prior to undertaking hygiene audits, hotels can refer to the AHLA Safe Stay guidelines for enhanced hotel cleaning practices, social interactions, and workplace protocols to meet the health and safety challenges and expectations presented by COVID-19.



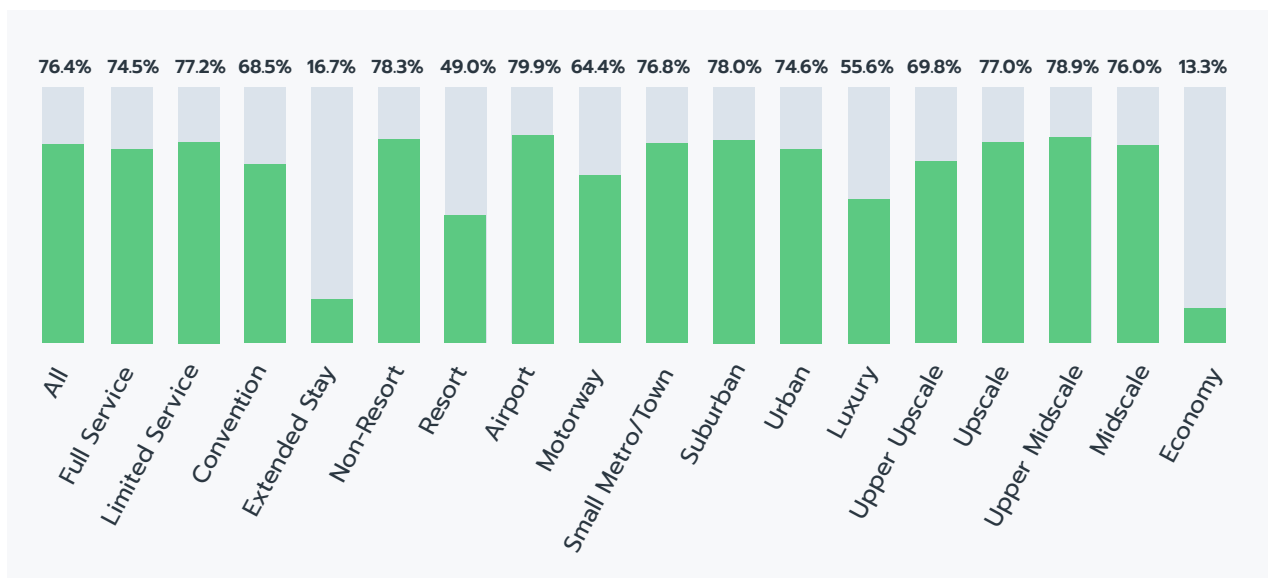
**Midscale and Economy categories are excluded from the chart as data is insufficient.*

Common practice

→ AIR PURIFICATION

Hotels having an air purification system or offering portable air purifiers is a common practice.

- More than three-quarters of all hotels have an air purification system or offer portable air purifiers.
- Full service (74.5%) and limited service (77.2%) hotels have a similar level of prevalence as the country-wide average.
- Across different location types, the prevalence rates are mostly comparable to the national average. Motorway hotels (64.4%) are less likely to have an air purification system or offer portable air purifiers.
- Economy hotels (13.3%) and extended stay (16.7%) hotels rank bottom for this practice.

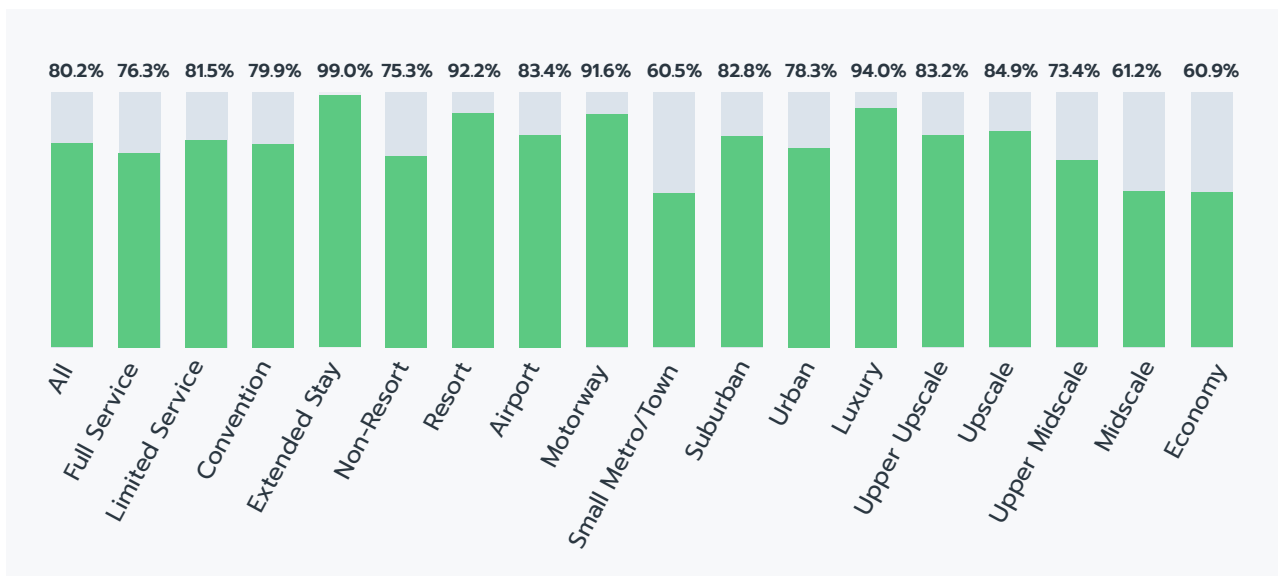


Common practice

→ CHEMICAL-FREE BATHROOM AMENITIES

Hotels offering wet bathroom amenities free of harmful chemicals to guests is a common practice.

- Four in five of all hotels offer wet bathroom amenities (e.g., shampoo and shower gel) that are free of harmful chemicals to guests.
- Full service and limited service hotels have prevalence rates that are on par with the national average, at 76.3% and 81.5% respectively.
- The prevalence of this practice is high across all property types. Extended stay hotels (99.0%) and resort hotels (92.2%) are the most likely to offer guests wet bathroom amenities that are free of harmful chemicals.
- This is a common practice for most location types, and an established practice for hotels in small metro and town areas.
- The prevalence of this practice generally increases across the STR chain scale segments.

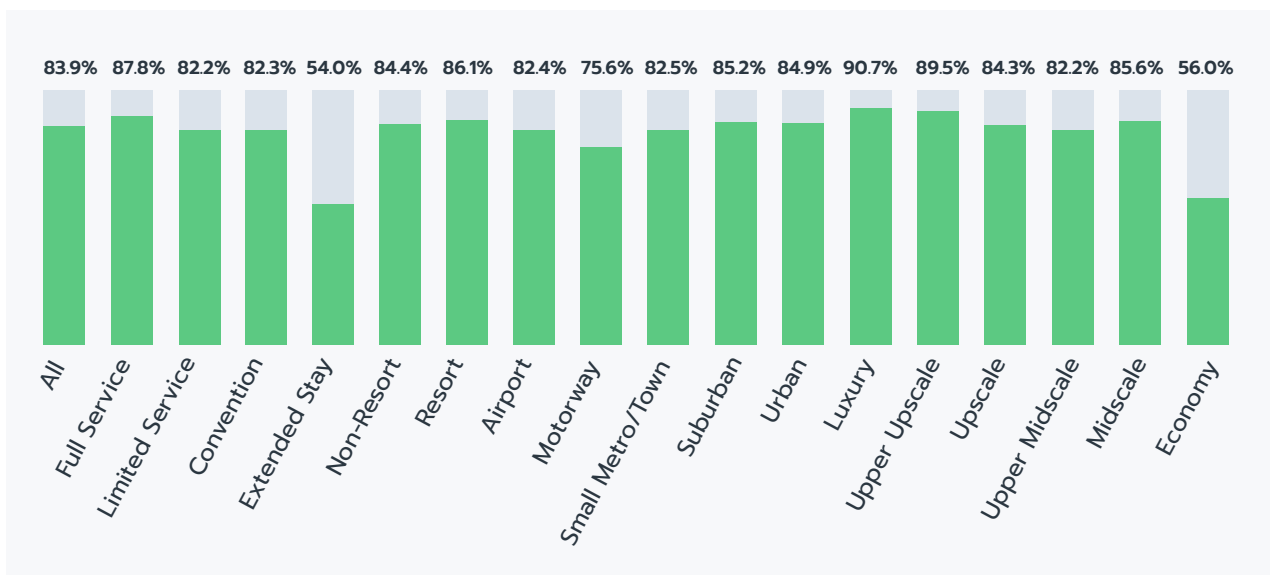


Common practice

→ ENVIRONMENTALLY FRIENDLY PEST CONTROL

Hotels using environmentally friendly alternatives to pesticides and insecticides is a common practice.

- 83.9% of all hotels use environmentally friendly pest control.
- This is a common practice regardless of service, property, and location type or STR chain scale segment, with prevalence rates ranging from 75.6% to 90.7%.
- The only exceptions are extended stay hotels (54.0%) and luxury hotels (56.0%), where implementing environmentally friendly pest control is an established practice.

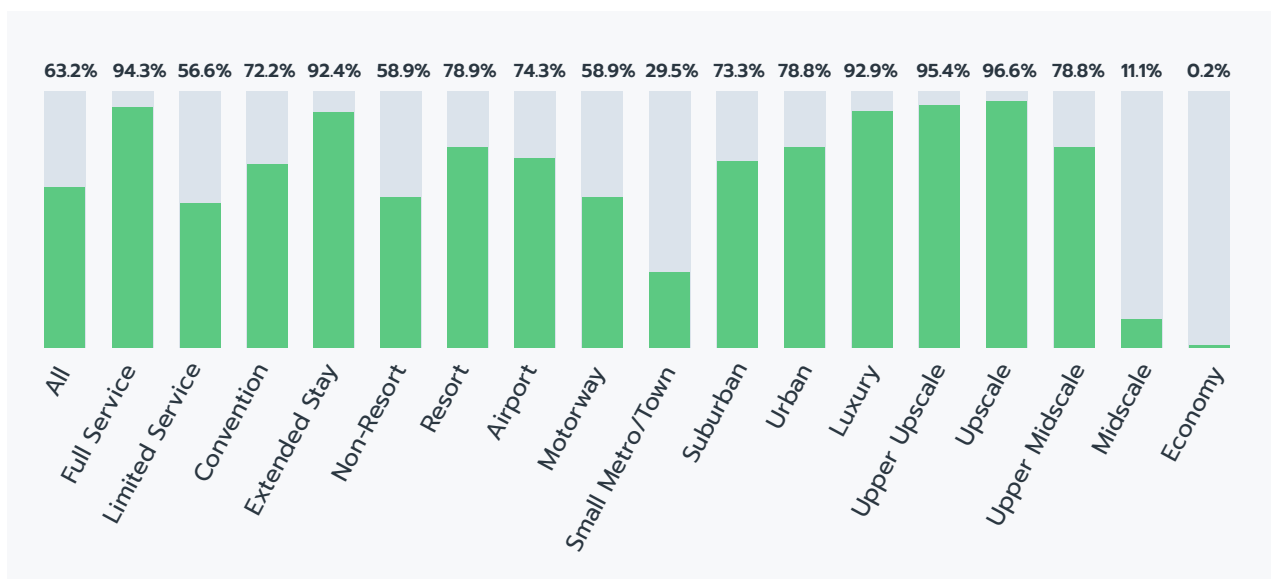


Common practice

→ GREEN CLEANING PRODUCTS

Hotels using green cleaning products (with exceptions for heavy soiling) is an established practice.

- 63.2% of all hotels use green cleaning products.
- Virtually all full service hotels (94.3%) use green cleaning products while slightly more than half of limited service hotels (56.6%) partake in this practice.
- Across all property types, extended stay hotels (92.4%) have the highest prevalence rates of using green cleaning products, making it a common practice. This is an established practice for other property types with the prevalence rates ranging from 58.9% to 78.9%.
- This is an established practice for most location types except for small and metro town areas (29.5%), where it is an emerging practice with lower prevalence.
- Across the STR chain scale, hotels in the higher segments ranging from upper midscale to luxury (78.8% to 96.6%) are much more likely to use green cleaning products than midscale (11.1%) and economy segments (0.2%).

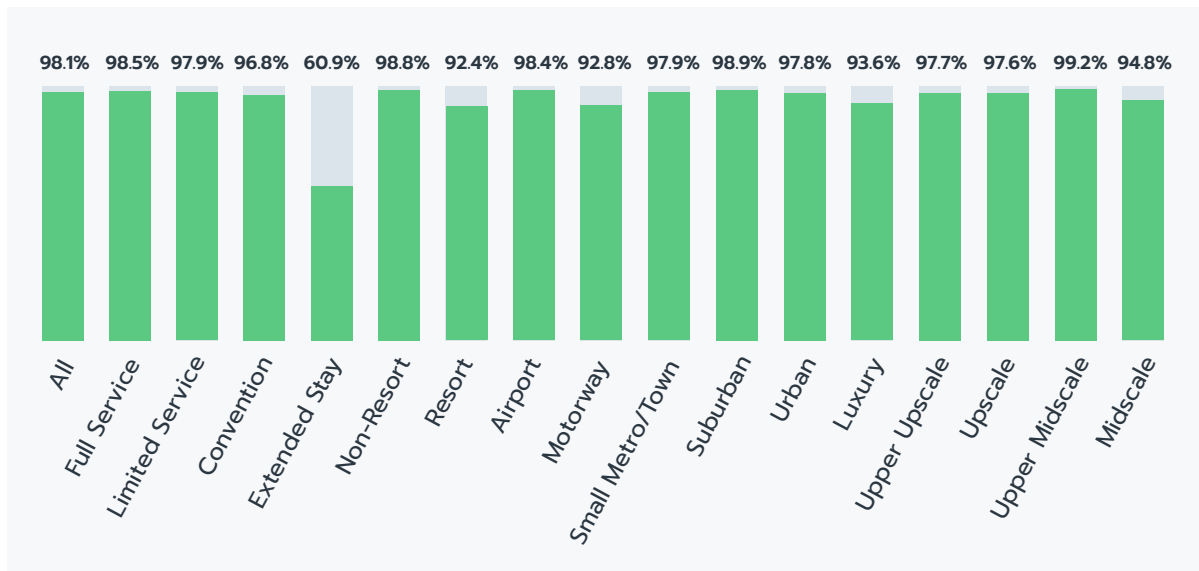


Established practice

→ LOW-VOC PAINTS

Hotels using low- or zero-VOC paints, finishes, and other items for renovations or other needed paint work is a common practice.

- Virtually all hotels use low- or zero-VOC paints (98.1%).
- The prevalence rate is consistently above 90% for most hotels, regardless of service, property, and location types, as well as STR chain scale segment.
- The only exception is extended stay hotels, where it is an established practice with a lower prevalence of 60.9%.



*Economy category is excluded from the chart as data is insufficient.

Common practice

ABOUT THE GREEN LODGING TRENDS REPORT (GLTR)

By participating in the Green Lodging Trends Report, hotels are entitled to receive this benchmarking report that includes a comparison of performance against peers by geographic location, service type, hotel type, and STR chain scale segment.

The 2022 GLTR Report includes 43 best practices. Best practices listed in this report are grouped into 9 themes: Management System, Community Impact, Health and Wellness, Responsible Consumption, Single-use Plastic Elimination, Waste Management, Water Conservation, Energy Management, Climate Action.

Hotels' responses for each question are tracked to compare with percentages of properties adopting each practice at country level (only if minimum count of properties is available) or global level to generate the benchmark statuses. A total number of at least 8 properties are required within the competitive set to generate the benchmark statuses. There are 7 types of benchmarks available for each question:

- **Aligned with Common Practice:** "Your Response" was "Yes" (or your property has the given practice in place) and country/global prevalence is greater than 75 percent.
- **Aligned with Established Practice:** "Your Response" was "Yes" (or your property has the given practice in place) and country/global prevalence is greater than 50 percent but less than or equals to 75 percent.
- **Aligned with Emerging Practice:** "Your Response" was "Yes" (or your property has the given practice in place) and country/global prevalence is 25% or greater but less than or equals to 50%.
- ★ **Among the leaders:** "Your Response" was "Yes" (or your property has the given practice in place) and country/global prevalence is less than 25 percent.
- **Opportunity to be a leader:** "Your Response" was "No" (or your property has NOT yet implemented the given practice) and country/global prevalence is less than 25 percent.
- **Room for improvement:** "Your Response" was "No" (or your property has NOT yet implemented the given practice) and country/ global prevalence is greater than 50 percent but less than or equals to 75 percent.
- **Among the laggards:** "Your Response" was "No" (or your property has NOT yet implemented the given practice) and country/global prevalence is greater than 75 percent.

For more guidance on how to read this report, please refer to the "How to Read GLTR Hotel Benchmark Report" section on page 10 of your individual benchmarking report.

Energy Performance

BEST PRACTICE	Your Response		Benchmark Status	PREVALENCE OF BEST PRACTICE COMP SET		
				GLOBAL Full Service	France Full Service	Paris Full Service
Regular Energy Tracking	✓	Yes	● Aligned with best practice	98%	100%	100%
Initiative(s) to Reduce Energy Use	✓	Yes	● Aligned with best practice	84%	83%	82%
Measure Carbon Emissions Regularly	✗	No	● Room for Improvement	78%	72%	50%
Initiative(s) to Reduce Carbon Emissions	✓	Yes	● Aligned with best practice	82%	79%	88%
Meeting Room Occupancy Sensors : 90%+	✗	0%	● Room for Improvement	63%	61%	75%
>75% LED Lighting	✗	No	● Room for Improvement	83%	85%	75%
Variable Frequency Drives	✗	No	● Room for Improvement	78%	62%	55%
Energy Audit	✓	Yes (within the past 4 years)	● Aligned with best practice	54%	63%	67%
HVAC Commissioning/ Retro-Commissioning	✓	Yes	★ Hotel is among the leaders	41%	47%	43%
>90% Windows enhanced reflective and/or insulating	✗	0%	● Opportunity to be a leader	39%	29%	57%
High Efficiency Boilers	✓	Yes	● Aligned with best practice	69%	57%	60%
High Efficiency Chillers	✗	No	● Room for Improvement	60%	50%	55%
Waste Heat Recovery	✗	No, we do not recover waste heat for reuse.	● Opportunity to be a leader	28%	43%	39%

ABOUT CORNELL HOTEL SUSTAINABILITY BENCHMARK (CHSB)

The Cornell Hotel Sustainability Benchmark (CHSB) is a collaborative effort between Cornell University's Center for Hospitality Research (CHR), hotel participants, Greenview, and an industry advisory group.

The latest benchmark, CHSB 2023, is conducted using 2021 data from a dataset of over 25,000 hotels worldwide. The CHSB aims to provide credible benchmarks of environmental data, including energy, water, and carbon, according to industry-specific segmentation. It shares synergy with the Green Lodging Trends Report which aims to benchmark the prevalence of sustainability best practices of hotels globally. Together, both studies act as lens into the latest sustainability trends of the hotel industry and serve to catalyze sustainability action across the industry.

CHSB insights on energy, water, and carbon for hotels across the U.S. were integrated into this AHLA Report. This includes an analysis of the average U.S. hotel's energy, water, and carbon intensities, top performing metropolitan areas and their associated intensities, and a comparison of energy and water efficiencies between the lower quartile and upper quartile performers (i.e., the efficiency gap). These efficiency gaps show how large the opportunities for improvement in energy and water performance potentially are.

