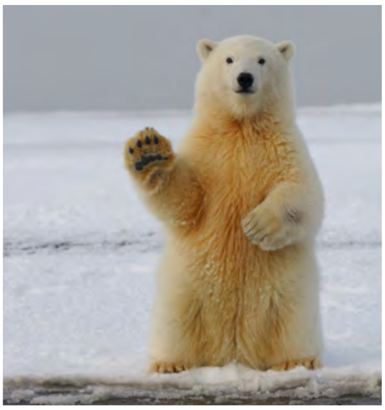
NET ZERO METHODOLOGY FOR HOTELS
SUMMARY

DECEMBER 2021



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This Net-zero Methodology for Hotels has been authored by Greenview and developed in a collaborative effort including Tourism Declares, PATA, the Sustainable Hospitality Alliance and WTTC, the large number of hotel industry experts who have reviewed and provided feedback on the drafts and individuals from across hotel, tourism and climate change organisations who engaged in the wider consultation.

It builds on over ten years of work in the hotel carbon measurement space with initiaitives such as the Hotel Carbon Measurement Initiative (HCMI), the Cornell Hotel Sustainability Benchmarking Index (CHSB), the Hotel Global Decarbonization Report and experience gained by individual hotel company efforts to set targets, including Science-Based Targets, and develop pathways to net-zero.

As the imperative to achieve net-zero intensifies, methodological approaches and frameworks evolve, and more data becomes available, the groups and individuals involved in this first draft of this methodology will continue to update and improve it, reviewing milestones as appropriate and publishing further versions as required.

ACKNOWLEDGEMENTS

The authors would like to thank all those who participated in the development of the Net Zero Methodology for Hotels, in particular representatives from the following hotel companies who formed the Advisory Group:

- Accor
- Caesars
- Dusit Thani
- Four Seasons
- Hilton
- Hongkong and Shanghai Hotels
- Hyatt
- Iberostar
- IHG
- Indian Hotels Co
- Jetwing
- Mandarin Oriental
- Marriott International
- Melia
- MGM Resorts
- Minor Hotels
- Oberoi
- Palace Resorts
- Radisson Hotel Group
- Soneva
- TUI
- Wyndham Hotels & Resorts

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INTRODUCTION

Net zero is becoming a real business need and trend, championed by the investor community and embraced by companies and governments around the world. However, net zero is somewhat still conceptual, and constantly evolving. Many different initiatives exist already with their own respective methodologies and ultimately, the technical aspects of net zero claims and approaches will be determined more specifically by industry and type of business model.

The Net Zero Methodology for Hotels aims to define this for the broader benefit of the hotel industry as well as travel and tourism. It has been developed to support hotels and the wider hotel industry as they seek to make net zero commitments and take action against them. It sets out a recommended approach which is relevant for hotel companies of any size but can be adapted as necessary to align with specific requirements of individual companies.

HOW SHOULD THIS SUMMARY BE USED?

This Summary provides an overview of the key issues to be addressed when a hotel or hotel company is considering and then making net zero commitments. Full discussion of each topic, as well as further information, FAQs and details on how this methodology aligns with other initiatives such as the GHG Protocol, Science-based Targets initiative, Race to Zero and the Glasgow Declaration, can be found in the full Methodology. This Summary should also be read in conjunction with the Practical Guide to Getting Started which provides a step-by-step approach to establishing a net zero pathway. All documents are available for download free of charge from www.greenview.sg.

Practical Guide

Full Methodology

WHAT TOPICS DOES THE METHODOLOGY COVER?

The methodology provides specific guidance in the following areas to help set a net zero commitment:

- Setting a baseline from which to pursue a net zero target
- Establishing the boundary of emissions that hotels should address over time as part of the baseline and target
- Establishing default categories for planning a net zero pathway, with milestones to achieve at 5-year interval yardstick years
- Quantifying emissions over time
- Understanding the variables that will be involved in pursuing net zero
- Understanding how the hotel's emissions will relate to the wider value chain of tourism and real estate

HOW WAS THE METHODOLOGY DEVELOPED?

The methodology was developed in a joint initiative between Tourism Declares, Greenview, the Pacific Asia Travel Association (PATA), Sustainable Hospitality Alliance and the World Travel & Tourism Council (WTTC) and supported by an Advisory Group of experts[1] from hotel companies around the world, with broad stakeholder consultation. As with all nascent ESG-related frameworks, further iterations and evolution is expected as net zero also evolves, with an update expected to come prior to 2025.

1 See Acknowledgements for list of Advisory Group members

A CARBON NEUTRAL TRIP OR HOTEL STAY VS NET ZERO

This methodology seeks to address a hotel or organization approach to pursuing a net-zero pathway, a long-term pathway that will require significant efforts for a hotel to achieve. It does not seek to define what is a 'carbon neutral hotel stay' or 'carbon neutral trip'. Although such products are offered, no common definition or criteria exist which has been specifically developed and adopted by the industry at large for a hotel stay, and as such claims are difficult to regulate or certify across the industry. Further work needs to be undertaken to identify the parameters of these claims, and differentiation should be noted between the possibility of the instance of a particular hotel stay being carbon neutral, vs a hotel or hotel company being entirely net zero. Further guidance on how to measure the carbon footprint of a hotel stay for offsetting or Scope 3 accounting purposes can be found in Section 5 of the full methodology, and tools for support are listed in Appendix J.

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1 SETTING A BASELINE

Setting environmental reduction targets starts with the concept of a **baseline value** against which progress can be measured over time. The baseline typically consists of a year and its corresponding intensity or absolute performance figures. Companies or hotels setting carbon reduction targets can choose the baseline year, the target year, and corresponding values.

While the advent of net zero puts the focus on an absolute end goal, ie that of net zero by a certain date, companies should still look to set interim decarbonization targets and to do so, will need to set a baseline year.

1.1 HOW SHOULD A BASELINE YEAR BE SELECTED?

There is no mandatory year for which a baseline should be set for net zero and many companies choose a baseline year which allows them to show most progress. This can include:

- A particularly good year for business, where emissions are higher due to high occupancy and consumption
- A year prior to when a company may have made several strides in improving energy efficiency via investment and operating procedures to a portfolio, so that this progress can be represented.
- Consideration of the external change in electric power grid factors of GHG emissions which may be much more favorable if they are captured over a period of time.

To provide guidance and simplify for comparison, for this methodology an organization can choose a baseline year from one of three periods, depending on their stage in the net zero journey, as set out in Box 1.

Depending on which year is set, the methodology sets out more specific expectations for percentage progress toward net zero. However, as a benefit of the net zero concept, some of the yardsticks and ultimate goals will be the same regardless of baseline year.

BOX 1 *Baseline Periods*

- **OG (Old Guard) Baseline** – a year prior to 2012, when many of the early adopters and large corporations had set baselines and started working toward targets, but which did not typically envision long-term decarbonization aligned with the science of climate change.
- **Prior Baseline** – a year between 2012 and 2019, when more companies started quantifying carbon emissions and pursuing targets once better data became available, generally prior to or around COP26.
- **Recent Baseline** – any year after 2020, when the Glasgow Declaration, this methodology with interim yardsticks, and stakeholder expectations for net zero are already in place and the entity will need to demonstrate progress immediately. This category is for newer hotels, new organizations, and those with difficulty obtaining quality data prior to 2020. Note that 2020 and 2021 are challenging as baseline years due to the effects of COVID-19, which may negatively skew performance thresholds when compared with future years.

1.2 SHOULD INTENSITY OR ABSOLUTE TARGETS BE SET?

For the purposes of net zero for hotels, the baseline should be communicated at a minimum in an intensity as well as an absolute figure for both individual hotels and for portfolios of hotels. In presenting both sets of figures, progress will be transparently reported, comparison can be made, and industry practitioners and relevant stakeholders can best relate and understand performance. Utilizing both will also mitigate against fluctuations in expectations from existing and yet-to-be-established initiatives, in terms of which is acceptable.

1.3 WHICH INTENSITY METRICS SHOULD BE USED?

For Scope 1 and 2 emissions, as well as those directly relating to the building and the aggregate of all sources, the intensity metric of floor area, expressed in kgCO2e/m2, should be used.

Scope 3 emissions that are driven more directly by occupancy or by other factors may use additional metrics.

1.4 HOW ARE CHANGES IN THE BASELINE ACCOUNTED FOR?

Generally speaking the baseline should be static. This means it should not be recalculated to reflect portfolio changes, except in cases such as where a merger or acquisition significantly changes a portfolio's geographic or asset class mix; or where improved or changed data is available due to new or improved methodology or emissions factors.

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2 THE GHG BOUNDARIES OF A HOTEL

The next step toward net zero is to determine the boundaries of the Greenhouse Gas (GHG) emissions that will be included in the baseline and target. These are guided by the GHG Protocol and its delineation of Scope 1, 2, and 3. Appendix B of the full Methodology contains further details on the concept of scope and the full list of potential sources of GHG emissions in a hotel.

2.1 WHAT ARE THE MAIN EMISSIONS SOURCES FOR HOTELS?

The GHG emissions quantification of a hotel is primarily centered on heating, cooling, and lighting of the building and its equipment. While the emissions of a building are fairly straightforward, the various activities involved in a hotel stay also generate a carbon footprint, such as bathroom amenities, food and beverage from restaurants, transportation of a guest to and from the hotel, and the various activities undertaken by the guest and the hotel staff outside the hotel. As net zero places an increased focus on the value chain activity, the boundary will need to be examined in terms of these activities as well as the entities related to a hotel stay.

2.2 WHICH ENTITIES ARE RESPONSIBLE FOR THE DIFFERENT EMISSIONS?

The structure of the hotel business means that different entities may own, operate and franchise an individual hotel. The implication of this complexity is that not only will there be double counting and different roles and responsibilities when it comes to decarbonization, it will often be the case that two or more entities will have to share the responsibility for addressing Scope 1 and 2 emissions, and increasingly Scope 3 as the momentum towards net zero increases and expectations grow for companies to address Scope 3.

Given the owner/operator distinction, when disclosing respective GHG emissions inventories, double counting commonly occurs for a hotel when both owner and operator report their emissions. The common practice in hotels is for the operator to use the operational control approach of the GHG Protocol, while the owner uses the financial control approach. Appendix A of the full Methodology contains further details.

2.3 HOW SHOULD EMISSIONS SOURCES BE PRIORITIZED?

In order to prioritize the many emissions sources relating to hotels, as part of the methodology development a classification system was devised. This included a four-step process:

1. **Prioritize the sources of emissions** in terms of their relative significance to a hotel's footprint, how common they are across the hotel industry, and the degree to which stakeholders will expect the emissions to be addressed.

2. **Identify cases where the sources of emissions may vary** within a particular hotel type or region in relative significance, as well as whether the same source of emissions may change in scope as Scope 1 & 2, vs. Scope 3.

3. **Evaluate the common sources of Scope 3 in relation to the role of owner or operator** (and subsequently franchisor) to identify significant differences in the share of control or influence that one role may have in comparison to the other.

4. **Evaluate the degree to which the sources of emissions can be credibly and consistently quantified** at present based on availability of default data and coefficients, methodology, and emission factors.

Based on this analysis (which are set out in detail in Section 2 and Appendix B of the full Methodology), a default hierarchy for the sources of emissions of a hotel was established and is set out in Table 1.

TABLE 1 ***Default hierarchy for the sources of emissions of a hotel***

CLASSIFICATION	APPROACH	EXAMPLES
Very High	Sources of emissions should be quantified, striving for granular level of activity data and actively pursuing efforts to improve calculation resources and methodologies when needed Quantifiable targets should be set, and decarbonization should be prioritized first within interim milestones Processes and engagement should be prioritized as soon as possible	Stationary combustion of primary fuels Purchased electricity Upstream emissions from purchased F&B and OS&E
High	Sources of emissions should be quantified based on actual data, particularly if part of the hotel's Scope 1 & 2 emissions boundary Efforts should be pursued to improve calculation resources and methodologies when needed in order to arrive at quantifiable targets Quantifiable targets should be set once sound calculation methods and resources are available, and decarbonization approaches made more apparent through engagement targets Processes and engagement should be prioritized when planning/engagement is available, within interim milestones as early possible	Purchased heating and cooling Laundry wash (when outsourced) Emissions from waste disposal and treatment Embodied carbon emissions of the building and FF&E Transportation of guests arranged by the hotel within the destination (when present) Employee commuting
Medium	Sources should be quantified but may be estimated using default data General processes and engagement should be developed within reason Targets should follow a decarbonization pathway by 2050	Transmission & Distribution losses from electric power distribution to the hotel Business travel
Low	Sources may be excluded from calculated boundary When significant for a particular hotel or company and included, quantification can be done using estimated or proxy data General processes and engagement should be developed within reason If present by 2040, targets should include that emissions be offset as residual emissions when related to the building, or by 2050 for others	Fugitive emissions from refrigerant leakages Other combustion of fuels when used for secondary purposes and insignificant in comparison to the rest of the hotel's Scope 1 & 2 emissions Transportation of guests arranged by the hotel to/from the destination
Out of Bounds	Others within the universe of potential sources that do not meet thresholds in the analysis of prevalence, significance, control/influence, and availability of credible and consistent emission factors	See Appendix B for full list of items

2.4 HOW CAN A PHASED APPROACH TO ADDRESSING THE DIFFERENT EMISSIONS SOURCES BE TAKEN?

With the results of the analysis, in order to achieve net zero a hotel should include the sources of GHG emissions, as outlined in Table 1, in its net zero plan. For each category, the hotel should have both a **quantifiable reduction target and engagement target**, with timing and distinction in consideration for Scope 3 phasing in of significant sources based and owner / operator distinction.

While the planning and engagement pathway can begin in year 1, quantitative measurement and targets are more challenging, and are categorized based on the availability of reliable, consistent approaches to quantification and respective emission factors, as set out in Box 2.

BOX 2 ***Phasing targets for reducing different emissions***

- **Included at Baseline** -emissions should be included from the same baseline year as Scope 1 & 2 emissions, and quantified each year toward the target of net zero
- **Included from 2025** -emissions are significant, but default or actual data are unavailable at this time and will require more years to accurately quantify. From 2025, these should be included in the calculation boundary, with the baseline emissions quantified for 2025 at the latest.
- **Included from 2030** - emissions are either significant but extremely difficult to quantify, relatively insignificant, or anticipated to be addressed within the value chain directly through other sectors. From 2030, these emissions should be included in the calculation boundary, and baseline emissions should be determined based on the latest methodology and best practices available for net zero overall and in their respective sectors of activity.

2.5 HOW SHOULD THE RESPONSIBILITIES OF THE OWNER AND OPERATOR BE DELINEATED?

Where there is a separate owner / operator for a property, a 'distinction' will need to be identified. This is further explained in Section 2 of the Methodology. In the case of a distinction, the entity with the distinction should be responsible for the quantification and setting of respective targets, while the other entity should include the source in the planning and engagement activities:

- **The owner** should include the physical aspect of the building including embodied carbon, land use change, and the purchased FF&E from development, construction, and renovations in the quantifiable inventory and targets.
- **The operator** should address the activities of guest involved in operating the building, and the upstream and downstream emissions from F&B and OS&E in the quantifiable inventory and targets.
- **Both entities** share responsibility for planning and engagement to use influence to support decarbonization of each category.

Further information on additional company-level considerations for companies that own, operate and franchise hotels; as well as discussion on emissions from embodied carbon and further rationale on emissions which have been classified as 'low' priority are detailed in Section 2 and Appendix B of the full Methodology.

3 HOTEL NET ZERO PATHWAY FROM 2025 TO 2050

Although the net zero's conceptual target year for decarbonization is 2050, meaningful progress needs to be made much sooner in order to achieve tangible results as well as to meet stakeholder expectations. **To support hotels in measuring and communicating progress, a recommended hotel net zero pathway has been developed** using the following elements:

- **Default Milestone Categories** of significant Scope 1,2, and 3 emissions that should be quantified and decarbonized, as applicable to the hotel or company.

- **Equity Considerations** for the business model of the hotel company, level of ambition attainable based on policy, regulation, development, and market mechanisms for progressing to net zero for a hotel and its value chain.

- **Both performance targets and engagement targets** as part of the plan along the pathway, so that all categories can be addressed immediately in some form, and performance targets can be differentiated based on distinctions of control and influence.

- **Five Yardstick Years** at five-year intervals through 2040 and finally 2050.

- **Specific Milestones** to achieve or commence by each yardstick year for quantitative performance, which vary based on the entity's role relating to the emission source.

3.1 WHAT ARE THE DEFAULT MILESTONE CATEGORIES WHICH SHOULD BE ADDRESSED IN THE PATHWAY?

Hotels should be able to quantify, plan, and progress toward net zero in the following default milestone categories, setting appropriate milestones in each. Each category will carry varying levels of ambition and expectation for progress from 2025 through 2050. The categories have been developed based on how a hotel would undertake a net zero plan in practice, and set a framework for enabling consistent reporting of progress to stakeholders. Categories are also specific to whether the entity is a hotel owner or operator, as well as franchisor or non-franchisor. See Table 2 for a full list of default milestone categories.

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TABLE 2 ***Default milestone categories***

MILESTONE CATEGORY	DESCRIPTION
Facility Emissions Intensity	Covers the emissions from the energy usage of the building itself, and separate from other sources of hotel operation that may be includes such as vehicles or fugitive emissions, to enable performance thresholds and comparability. The primary KPI of Scope 1 & 2 emissions is intensity per square meter, progress against which will be determined by actions in the other Scope 1 & 2 categories. The effects of changes in electric power emission factors - from which emissions from electricity are derived - will be most profound in this category. This category also covers carbon offsetting for the building Scope 1 emissions based on yearly limits.
Energy Efficiency	All activities to reduce the Scope 1 & 2 energy consumption of the facility, including investment in efficient design, equipment, technology, and operating procedures
Energy Sources	The various forms of installing or purchasing energy either as a source of power for the hotel in Scope 1 & 2 emissions, or as a contribution to the electric power grid via market certificate or mechanism for the hotel's Scope 2 emissions. Includes activities to switch to cleaner fuels used by the hotel, and switching to electric power as an energy source for heating and cooling from fuels
Other Scope 1 & 2	Includes any other Scope 1 & 2 emissions sources of the hotel or the company that are not included in the default boundary of performance targets, but should be part of engagement targets, and may be material to the hotel or the company and increase in priority level, including: fugitive Scope 1 emissions from refrigerants, vehicles , additional company facilities, business units or other activities.
Franchised Properties	Reductions of Scope 1 & 2 emissions of franchised properties that form the Scope 3 boundary of the franchisor, if applicable.
Waste	Activities to reduce emissions of waste disposal, in terms of source reduction, reuse, and diversion from landfill or incineration (recycling, composting, upcycling, donation, etc.) which are categorized as Scope 3.
Outsourced Laundry	Scope 3 emissions of laundry wash at a separate offsite facility outside the hotel's ownership or operational control.
Embodied Carbon of Building, land use change, and FF&E	The most significant sources of Scope 3 emissions which are often classified as "Capital Goods" in Scope 3 evaluation, consisting of the construction of a hotel and the upstream lifecycle emissions of the building materials and FF&E, according to a life-of-use allocation of the embodied carbon balance over the lifecycle of the hotel. This category is a catch-all for several sources, which can be further segmented and clarified in future years.
Purchased Ongoing Consumable Goods (F&B, OS&E)	The most significant sources of Scope 3 emissions from the upstream lifecycle emissions of products sourced for ongoing consumption at the hotel.
Employee Commuting	Scope 3 emissions of property staff commuting to and from work via transportation not owned or operated directly by the hotel.
Business Travel	The transportation and lodging for purposes of business travel of property-level and company-level staff employed by the organization.
Transmissions & Distribution Losses	Emissions from location-based losses from delivery of purchased electricity from source (utility) to the hotel
Other Significant Scope 3	Any other Scope 3 emissions sources of the hotel or the company that are not included in the default boundary, but are material to the specific hotel or the company and require a different approach and milestone pathway to net zero, including: a Guest transportation and other activities within the destination b Transportation of fuel for onsite generation of electricity in remote, private island resorts.

3.2 HOW CAN GEOGRAPHICAL OR BUSINESS MODEL DIFFERENCES BE ACCOUNTED FOR IN THE PATHWAY?

The concept of equity principles allows for different pathways to be set based on elements inherent to the company, but over which there is no control. The methodology sets out two equity principles which may be applied.

BUSINESS MODEL EQUITY PRINCIPLE

The milestones for each category are structured for a **business model equity principle**. Hotel companies with business models *not* based on consistent floor area growth should be expected to decarbonize the emissions from use of the building more quickly by 2030 and incorporate embodied carbon of the building into their value chain emissions accounting. They have more control in the short- and long-term investment decisions of the assets, benefit much more from external grid decarbonization, hold more economic value per square meter of the same real estate utilized, derive benefit from general appreciation of the asset value of the property over time, and can decouple economic growth from carbon emissions more easily.

REGIONAL EQUITY PRINCIPLE

The methodology embeds a **regional equity principle** to approach the milestones based on a designation of **immediate markets** and **next markets.** These markets are not easily defined as there are likely to be transition pathways and stages for countries that evolve in the coming years, but for the purposes of this methodology the **designation is essentially once a viable renewable energy purchase of Renewable Energy Certificates (RECs) / Energy Attribute Certificates (EACs) or direct sourcing of Purchasing Power Agreements (PPA) for all its electricity is readily available for a single hotel to purchase directly at reasonable cost, the location would be considered an immediate market**, as the hotel is enabled to immediately purchase and reduce market-based emissions.

In general, hotels located in immediate markets should be expected to transition to renewable energy and decarbonize across the value chain more quickly, and the related cost increases should be absorbed more quickly. Conversely, next markets should be prioritized first in energy efficiency, fuel switching, and then carbon offsetting and other value chain activities in a **sustainable tourism equity principle**, which is further outlined below.

3.3 WHAT SHOULD BE ACHIEVED BY 2025, 2030, 2035, 2040 AND 2050?

A suggested, credible pathway is presented for hotels to progress toward net zero with five yardstick years identified, based on an overall scenario as described below.

These yardstick years and milestones may differ from company to company and evolve over time, as hotels may seek to advance more rapidly in decarbonization, need to modify and expedite to meet certain criteria of other frameworks, or be regulated by government policy to do so differently.

For the most important milestone categories of reduction in energy efficiency and renewable energy procurement, **the following rule-of-thumb pathways are suggested from the baseline year through 2030**:

- **Scope 1&2 emissions intensity** should be reduced by 3% per year for OG Baselines (<2012), 4% per year for Prior Baselines (2012-2019), and >5% per year for New Baselines, unless emissions intensity is below the threshold decarbonization pathway for buildings
- **Energy intensity should seek to achieve** a general linear trend averaging reductions of 2% per year through 2030, and 1% per year after 2030 regardless of baseline, unless energy intensity is already among highest performance in industry best practice or nearly all energy is from renewables

For a detailed net zero pathway please see Table 3 in the full Methodology.

GENERAL AMBITIONS FOR EACH YARDSTICK YEAR

2025

PLAN, COMMIT, QUANTIFY, ENGAGE

The year by which hotels have made their commitment and disclosed a plan for quantifying emissions of each of the categories in the default boundary, as well as for implementing actions to decarbonize each of the milestone categories.

2030

RENEWABLES AND CARBON OFFSETTING IN PLACE

Most important year for climate action, in particular regarding renewable electricity. Carbon offsetting approaches should be commenced for addressing residual emissions and the related offsets that have been purchased by various entities in the value chain that correspond to the hotel and hotel stay.

2035

SHIFT FOCUS TO RESIDUALS AND VALUE CHAIN

2035 completes the pathway on renewable electricity and value chain engagement, and creates the inflection point to focus on residual emissions and value chain decarbonization.

2040

CREDIBLE CLAIMS FOR NET ZERO FOR BUILDING

By 2040, hotels should be able to make credible claims to achieving net-zero for the emissions of the building.

2050

NET ZERO ACHIEVED

Net-zero is achieved, with all value chain emissions heavily decarbonized, residual emissions are minimized, quantified and offset when there is no viable alternative. The focus transitions to supporting corresponding hotel carbon budgets for removing atmospheric CO2e and addressing the mitigation issues resulting from physical impacts of climate change.

2025

2025 should be the year by which hotels have made their commitment and disclosed a plan for quantifying emissions of each of the categories in the default boundary, as well as for implementing actions to decarbonize each of the milestone categories.

SCOPES 1 & 2

- Significant progress should be made in the fundamentals of increasing energy efficiency measures and the related opportunities for reducing costs as a result of doing so.
- After energy efficiency, progress should be made on commencing or advancing on procurement of renewables, and engaging with the value chain and stakeholders toward action.
- Credible claims for offsets can be made within allowable thresholds.

SCOPE 3

- Sources which are more challenging to quantify and influence (such as embodied carbon and LCA emissions of purchased goods), should be identified in further granularity for quantification and action.

2030

This is the most important yardstick year for climate action, in particular regarding renewable electricity. Carbon offsetting approaches should be commenced for addressing residual emissions and the related offsets that have been purchased by various entities in the value chain that correspond to the hotel and hotel stay.

SCOPES 1 & 2

- All electricity should be sourced from renewables in immediate markets. In doing so, most of the hotel industry easily will halve their emissions from a 2019 baseline and align with sectoral convergence for emissions of service buildings.
- As the lynchpin of sectoral decarbonization, efforts to purchase renewables will support cross-sectoral need to decarbonize the electric power grid.
- Progress should be made on all the aspects of the plan.
- Thresholds for the amount of offsets that can be used in credible net zero claims are further reduced as the expectation is that energy efficiency will have significantly increased, electrification will have advanced, and renewable energy purchases will provide the majority of the decarbonization progress.

SCOPE 3

- Embodied carbon and other purchased goods and services LCA emissions should have been quantified and actions commenced to decarbonize.
- Supplier engagement through the value chain should be enacted with demonstrable, quantifiable progress enabled.
- In the case of franchised properties, hotel franchisors should be able to gather accurate data for almost all the portfolio and have engagement mechanisms in place for franchisees to purchase renewable energy and make notable progress in efficiency.

2035

2035 completes the pathway on renewable electricity and value chain engagement, and creates the inflection point to focus on residual emissions and value chain decarbonization.

SCOPES 1 & 2

- Renewable electricity advances across all geographies, carbon offsets threshold claims further reduce, and other residual emissions are started to be addressed.

SCOPE 3

- Franchised properties and properties located in next markets for renewable energy purchase mechanisms catch up to 100% renewable electricity, as it is now expected by the tourism distribution and customer that a hotel stay will be powered by renewable energy by default.
- All direct suppliers in the value chain boundary are powering electricity by 100% where possible.
- All contractual agreements with Scope 3 value chain vendors embed net zero stipulations, including high efficiency and electrification fully embedded in new development.
- Significant progress is made on reducing the footprint of significant sources of emissions in embodied carbon and purchased goods and services.

2040

By 2040, hotels should be able to make credible claims to achieving net zero for the emissions of the building.

SCOPES 1 & 2

- The carbon emissions from all of the default categories can be shown to have been reduced to an absolute minimum and aligned with the targets in the Sectoral Decarbonization Approach.
- Residual emissions from remaining non-renewable energy sources are quantified and offset as a standard practice contractually bound across the value chain of a hotel stay.
- The focus of carbon offsets shifts in principle toward removal projects.

SCOPE 3

- Franchised hotels also achieve net zero for their own respective scopes 1 & 2.
- New hotels should be net zero with the residual emissions offset in embodied carbon upon completion.
- All other value chain emissions in the default categories are quantified with clear plans for reducing to net zero by 2050.

2050

Net zero is achieved, with all value chain emissions heavily decarbonized, residual emissions are minimized, quantified and offset when there is no viable alternative. The focus transitions to supporting corresponding hotel carbon budgets for removing atmospheric CO2e and addressing the mitigation issues resulting from physical impacts of climate change.

3.4 WHAT HAPPENS IF THE COMPANY VEERS OFF TRACK IN ITS PATHWAY?

Perhaps the biggest limitation in the current environment of net zero and Science-based Target setting is an ambiguous answer to "what if the company veers off track in its pathway?". In deviating from a pathway, theoretically a carbon balance is generated that should be addressed and incorporated in some way as residual emissions. Guidance and methodology are still evolving in this area.

This methodology purposefully limits guidance on how to "get back on track" in quantifiable terms, since the current net zero focus in 2021 is on credible planning for commitments and action. Moreover, the carbon target discussion in 2021 is entirely different and evolved from the one in 2016, and the playing field and urgency may completely change by 2025.

However, at high level, organizations should:

- **Disclose their progress and failures** to stay on track in each of the default categories in the corresponding yardstick year and baseline year
- **Include a plan to get back on track** by the next yardstick year for which they will be held accountable
- **Ensure the value chain will also be held accountable**.

3.5 HOW SHOULD CARBON OFFSETTING BE APPROACHED?

It is clear that carbon offsetting has a role to play in the hotel industry's pathway to net zero, regardless of the challenges it poses and detracting stakeholders. The realities of the hotel sector and tourism more widely mean that for some activities, carbon offsetting is the most significant way a carbon footprint can be mitigated until 2030.

The methodology sets out a strategic approach to carbon offsetting which includes:

1. All entities in a hotel's value chain can include the carbon offset of a hotel stay in their accounting for net zero.
2. Hotels can count offsets within the sectoral budget for Scope 1.
3. To be included in a hotel's carbon offsetting claims for both Scope 1 and 3, the offset must meet a minimum threshold of quality and contribution to sustainable tourism or overall SDGs.

Photo by Aleksandar Pasaric from Pexels

In order to align carbon offsetting initiatives with the requirements of a net zero pathway, four principles are proposed[2], as outlined in Box 3.

BOX 3 ***Principles of Carbon Offsetting for Net Zero***

1. **Cut emissions, use high quality offsets, and regularly revise offsetting strategy as best practice evolves.**
   Hotels should prioritize reducing emissions and scaling up removals, minimizing the need for offsets to achieve net zero. If offsets are required, they should be verifiable and correctly accounted for, and have a low risk of creating negative unintended consequences.

2. **Shift to carbon removal offsetting.**
   An immediate transition to 100% carbon removals is not necessary, nor is it currently feasible, but organizations must commit to gradually increase the percentage of carbon removal offsets they procure with a view to exclusively sourcing carbon removals by mid-century.

3. **Shift to long-lived storage type carbon offsets.**
   Offsets increasingly need to come from activities that store carbon permanently, with very low risk of re-release into the atmosphere. Long-lived storage refers to methods of storing carbon which have low risk of reversal over centuries to millennia. This includes storing CO2 in geological reservoirs or mineralizing carbon into stable forms.

4. **Support the development of net zero aligned offsetting.**
   Large hotel brands and chains can use their presence in the industry to drive the demand for net zero aligned carbon offsets. This can be done by creating demand for offsets that are aligned to the above principles and thus encouraging their development and expansion across the travel and tourism value chain.

2 Based on the Oxford Principles of Offsetting accessible at https://www.smithschool.ox.ac.uk/publications/reports/Oxford-Offsetting-Principles-2020.pdf

Photo by Pixabay from Pexels

When exploring Principle 4, carbon offsetting has the potential to play a fundamentally different role in the travel industry than in other sectors if aligned with *sustainable tourism*, and as such the **Sustainable Tourism Equity Principle** should be prioritized. In particular, carbon offsetting projects that protect the natural and cultural heritage in locations visited by travelers, can play a dual role in preserving the assets that generate benefit for travel while offsetting the emissions of an activity, while providing more relevant context for the offset project in relation to the traveler. See Box 4 for more information.

BOX 4 ***Sustainable Tourism Equity Principle***

- Carbon offsets relating to hotel emissions should create a nexus of benefits between carbon offsetting and tourism, so that the offset projects also benefit local economies and heritage. For a minimum threshold contribution to sustainable tourism, the selection of a project should be viewed in terms of its geographic location and its contribution to the UN Sustainable Development Goals.
- The offset should provide a tangible economic and social benefit to SMEs and local communities and economies, ideally supporting the decarbonization of emissions related to tourism activities.
- The offset should contribute to preserving natural and/or cultural heritage.
- The offset should identify the contribution to related SDGs as it pertains to supporting a location used for tourism, and in particular it should benefit tourism-related businesses and activities.
- The offset should be related as best as possible to the region of the hotel: municipality, state/province, country or physically proximate region. Where the hotel is located in an area without proximity to potential offset projects, it should be at least tied to the same macro region of the globe.
- Finally, a carbon offset project can also seek to align with the hotel company's corporate strategy or their sustainability program. For example, if the company has a vision to empower women, or to empower certain communities, minorities, refugees, or to improve education, then they should look for projects which are focused on such themes.

A comprehensive offsetting strategy for the hotel and tourism sectors is set out in Appendix G of the full Methodology.

Photo by Julia Volk from Pexels

4 GHG EMISSIONS QUANTIFICATION AND REPORTING

GHG emissions and corresponding plans and progress should be publicly reported annually for each of the default categories. The methodology provides guidance for reporting, recognizing that this may differ from current or eventual regulatory reporting requirements or stakeholder formats.

Disclosure is not intended to evolve into a formal protocol or an addition to the already cumbersome annual ESG reporting process, but a simplified table that can be added to an appendix of an ESG report or stand-alone PDF download, and ultimately the source submitted to disclose a net zero claim to a stakeholder. Note that the primary purpose of this document is methodology rather than reporting and disclosure, which will fit into existing channels as necessary.

4.1 WHAT SHOULD BE TAKEN INTO CONSIDERATION WHEN REPORTING NET ZERO PROGRESS FOR HOTELS?

As a general rule, hotels should follow the GHG Protocol Corporate Accounting and Reporting Standard and ISO 14064-1:2018 Organizational Level Quantification and Reporting of GHG Emissions and Removals, with the following clarifications based on common industry practice:

- **Reporting on individual gases**
  As common practice, hotels report on associated CO_2, CH_4 (Methane), and N_2O (Nitrous Oxide) emissions collectively as CO_2e as those are the ones found in the sources of energy consumed and purchased. As CH_4 and N_2O are consistently an insignificant source in comparison to CO_2, hotels only report on individual gases when required by disclosure frameworks such as CDP. Where relevant, hotels can report on HFCs. Other Greenhouse Gases are excluded as they are not significant and generally not present in commercial buildings.

- **Reporting based on financial or operational control**
  Hotels generally report based on financial control or operational control, with operators reporting using the operational control approach, and owners using the financial control approach. Where a company owns a portion but not all of its portfolio, it tends to use operational control. Reporting on equity share has proven cumbersome and impractical for the hotel industry and is uncommon.

- **Time period to be reported**
  Hotels should use a calendar year or a 12-month period aligned with financial reporting or the realities of data availability i.e. October-September that spans two calendar years. For fair comparison, a calendar year boundary should be used.

- **Data hierarchy**
  The data hierarchy to be followed is: activity data is the most preferable when available, followed by proxy data based on prior or relevant actual data to the company next best, and default data is the least preferable.

Photo by Tomáš Malík from Pexels

- **Data conversions**
  For converting actual activity data (fuel consumption, purchased electricity usage, etc.), the following are recommended:

    - The latest emission factors available for the same calendar year should be used.

    - The global warming potential (GWP) of CH_4 and N_2O commonly use 100-year values based on IPCC AR5[3] until IPC AR6 is released, at which time it should be updated as retroactively as possible. Some argue a 20-year horizon for methane, though this is not the most common approach for the hotel industry.

    - Emission factors should be chosen at country and sub-national levels as best and consistently available. A complete list of sources of emission factors used for the hotel industry is available in the guidance document of each year's Cornell hotel Sustainability Benchmarking (CHSB) Index.[4]

    - Although emission factors for purchased steam and chilled water should be reported based on the emission factor provided by the supplier, in most cases this has proven extremely challenging for the hotel industry. A default emission factor or a default methodology will most likely be the best alternative until something better is developed. This includes the emission factors for steam published by the Energy Star in the US or the UK Government, and the US Energy Information Agency 2010 publication 1605(b).

- **Reporting purchased heating and cooling**
  For the Scope 2 emissions boundary as per the SBTi, hotels may choose to report purchased heating and cooling (i.e. steam and chilled water from central plants or other sources) as Scope 1.

    - Though this contradicts the GHG Protocol, the SBTi has offered this approach as those sources are generally tied to the same uses of Scope 1 for heating and cooling a building.

    - Alternatively, hotels can report in a structure of electric vs. non-electric emissions as the distinction to be more clear, as onsite electricity generated at the property under its ownership is technically Scope 1 and creates the same challenge, as does electrification of heating and cooling in general.

- **Hotels may report both location-based and market-based emissions**[5].

    - All hotels at the least should report market-based emissions. As net zero advances and renewable energy purchases become the primary approach toward decarbonization for a commercial building, location-based accounting will be less relevant.

    - For market-based emissions, although the GHG Protocol Scope 2 guidance indicates that the *residual mix* should be used to determine emission factors, in practice this is unavailable in almost all the world except Europe, and the methodology is still evolving, with historical figures only available for the past few years and varying widely. The common practice is to report using the same set of emission factors used for location-based reporting and subtract the purchased renewables.

Guidance for an approach to the residual mix, and further explanation on approaches to Scope 2 emissions calculation are found in Appendix D of the full methodology.

3 Intergovernmental Panel on Climate Change 5th Assessment Report

4 CHSB is available at www.greenview.sg/chsb-index

5 See Appendix D of full methodology for more information

4.2 WHICH MEASURES AND METRICS SHOULD BE USED?

The following should be reported at a minimum and be publicly available in some format, which can be a routine ESG disclosure or report. The methodology also includes additional metrics which hotels might find it useful to report. Table 3 shows the recommended metrics.

TABLE 3 *Metrics and Measurements for Reporting*

Emissions	Measurement Metric
Total Scope 1 Emissions	$kgCO_2e$ for a hotel $MTCO_2e$ for a portfolio
Total Scope 2 Emissions	$kgCO_2e$ for a hotel $MTCO_2e$ for a portfolio
Total Scope 3 Emissions by category	$kgCO_2e$ for a hotel $MTCO_2e$ for a portfolio
Scope 1 & 2 Emissions	$kgCO_2e$ per square meter
Total Scope 1, 2 & 3 Emissions	$MTCO_2e$
Hotel Carbon Measurement Initiative (HCMI) (for property)	$kgCO_2e$ per room night $kgCO_2e$ per square meter per hour of meeting space usage
Percentage of Scope 1 and 2 energy from renewables	%
Percentage of electric power obtained from renewables	%
Energy intensity	kWh per square meter

4.3 WHAT ELSE SHOULD BE DISCLOSED?

In addition to annual disclosure of the metrics above, companies (or individual hotels if required) should disclose the following content at a minimum in the year of their commitment and within any climate action plans[6] and then thereafter it is suggested to disclose in 2025, 2027, and 2030[7]. Baseline and current progress in each of the default categories for the corresponding year for categories with defined KPIs.

- Description of the plan, or link to where the plan or description of it is located, which should be updated for all categories
- Any significant changes since the prior disclosure (i.e. adjusted baseline)
- Sources of emission factors and coefficients used to perform the calculations, with year of publication.
- Clarifications on key assumptions, estimations, extrapolations, exclusions, or other aspect to enable stakeholders to assess progress fairly.
- Indication of the figures that have been externally verified.

6 Climate Action Plans as outlined by the Glasgow Declaration for signatories to deliver within 12 months of signing the commitment

7 These years have been selected to support the preparation of future methodology versions to address 2030 guidance and yardsticks ahead of them, and so that a company is expected to disclose at least once in between the five year increments.

4.4 HOW DOES REPORTING FOR A SINGLE HOTEL DIFFER FROM PORTFOLIO LEVEL REPORTING?

While the methodology is applicable to both individual properties and portfolios when it comes to reporting there are some important distinctions to be made. More details can be found in Section xxx of the full methodology but can include:

- Additional sources of emissions which are applicable specifically to a single hotel (eg refrigerant leakages, mobile vehicle fuel or onsite wastewater treatment).
- Separate reporting of other company Scope 1 & 2 emissions (such as corporate headquarters) for portfolios
- Separate reporting of different sub-portfolios of varying asset classes or in the case of different degrees of financial and/or operational control
- Specific consideration for portfolios to take into account the variance between location-based emission factors and residual mix emissions factors
- More complex changes and data challenges for portfolios such as including/excluding properties as they enter/exit the portfolio, gap filling missing data etc.

4.5 WHAT SHOULD BE REPORTED FOR COMPANY COMPARISONS AND BENCHMARKING?

When a hotel or company is disclosing its net zero plan and progress, the indicators reported may vary widely in boundary and quantification method such as choice of emission factors. Essentially the hotel or company is reporting against itself, and harmonization should not be needed in addition to the common set of metrics and disclosures provided in this section.

For reporting to enable comparing performance across hotels or portfolios, the following opportunities for disclosure exist:

- Comparing level of ambition toward the milestones in relation to yardstick years. Some may plan to reach net zero prior to 2050, some may transition to renewable electricity before 2030, etc.
- Percentage of electricity from renewables, which does not involve intensity metrics
- Energy and carbon emissions intensity that is calculated uniformly with the same set of metrics, conversions and emission factors for all hotels such as the Cornell Hotel Sustainability Benchmarking Index

Photo by Ricardo Esquivel from Pexels

5 HOTELS AS PART OF OTHER ENTITIES' VALUE CHAIN EMISSIONS

For net zero, the carbon footprint of a hotel stay should be understood within its relationship to the wider value chain of hospitality and travel. In addition to the three separate potential entities of owner, operator, and brand franchisor that one hotel would fall under, the hotel may also form part of the boundary of a contracted real estate asset manager as well as the entities financing or investing in the hotel or company, and the corresponding emissions need to be reported, and encompassed in corresponding net-zero targets of that entity.

Along with transportation, accommodation is part of Business Travel, one of 15 the defined categories for any company within the GHG Protocol Supplement: Corporate Value Chain (Scope 3) Accounting and Reporting Standard, and a hotel stay is also part of the value chain for tour operators and other entities that sell packages or perform roles in bookings and transactions. Finally, a hotel is part of a wider destination or set of destination-level entities. destination or set of destination-level entities.

For all of these entities and more, the hotel or a hotel stay is part of their Scope 3 value chain emissions that will need to be addressed in their own respective net zero action and to whom hotels may be required to provide carbon emissions data.

5.1 HOW DO THE CARBON EMISSIONS OF A HOTEL ROOM RELATE TO THE SCOPE 3 OF ENTITIES ACROSS THE VALUE CHAIN?

Other than the owner and operator, a hotel or hotel stay may fall within the Scope 3 emissions of the entities outlined above. While relation of the entity to the hotel varies in proximity and control, the most important consideration is to avoid Scope 3 of a Scope 3 in the boundary, meaning that at a default, unless commonly expected, a hotel's Scope 1 & 2 Emissions listed in Table 2 above should be included, but NOT the hotel's Scope 3, and should be adjusted to add or remove Scope 1 & 2 sources for level of significance.

Based on that premise, chain entities should then proceed to account for their organizational Scope 3 emissions from hotels or hotel stays per the relation in the table below. Note also that Scope 3 inherently involves double-counting, so Table 4 below is for purposes of supporting value chain accounting, but not to imply that allocation or apportionment of emissions should be quantifiably distributed among entities.

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TABLE 4 ***Hotel Carbon Emissions in the Value Chain***

<table>
<tr><th>ENTITY</th><th>RELATION AND ROLE</th><th>SCOPE 3 BOUNDARY</th></tr>
<tr><td>HOTEL FRANCHISOR</td><td>Provides the brand/flag of the hotel and other support. The franchisor does not staff the hotel or take part in its operation.</td><td rowspan="2">Scope 1 and 2 Emissions of the hotel facility and operations</td></tr>
<tr><td>HOTEL ASSET MANAGER</td><td>Manages the ongoing strategy and budget of the physical hotel property on behalf of the owner.</td></tr>
<tr><td>HOTEL COMPANY INVESTOR</td><td>Invests capital into the entity that owns, operates, and/or franchises a hotel or a portfolio of hotels.</td><td rowspan="2">Scope 1 and 2 Emissions of the hotel facility and operations

Note that the proportionate embodied carbon of the building in the case of investing in an owner should be accounted for</td></tr>
<tr><td>HOTEL LENDER</td><td>Provides a loan to the entity structured to own the hotel property.</td></tr>
<tr><td>HOTEL DEVELOPER</td><td>An entity that leads the design, financing, permitting, land acquisition, and construction of the hotel or master-planned destination, then sells the real estate to a different owner.</td><td>Until exiting the venture, Scope 1 and 2 emissions of the hotel facility and operations

Embodied carbon emissions of the building are the entity's Scope 1, 2 and 3 depending on the source</td></tr>
<tr><td>PHYSICAL DESTINATION ENTITY</td><td>When a hotel is located within a specific, master-planned mixed use destination where the entity may be a development corporation but plays an ongoing role in the destination's management and ownership.</td><td>Scope 1 and 2 Emissions of the hotel facility and operations

Other value chain emissions of the hotel to be captured separately via other boundaries of the entity (i.e. entity may own/operate the ground transport or outsourced laundry facilities directly)

Note that the proportionate embodied carbon of the building in the case of investing in an owner should be accounted for, which may fall under Scope 1&2 or Scope 3 depending on the structure</td></tr>
<tr><td>GEOGRAPHIC/

POLITICAL DESTINATION ENTITY</td><td>The municipal, state/province, designated tourism zone/region, nation, or supranational union or initiative covering several states, nations or economies.</td><td>Scope 1 and 2 Emissions of the hotel facility and operations

Other value chain emissions of the hotel to be captured separately as related to businesses and activities within the destination</td></tr>
<tr><td>GUEST</td><td>The person or persons staying at the hotel or where applicable, attending the meeting or using other amenities or facilities.</td><td rowspan="2">Scope 1, 2, and 3 emissions from the hotel stay calculated using the HCMI methodology, apportioning emissions based on facility type and including outsourced laundry</td></tr>
<tr><td>CUSTOMER</td><td>The entity on behalf of which the guest is staying, if the guest is part of an organization. Or an entity such as a tour operator.</td></tr>
<tr><td>TRAVEL BUYER</td><td>An entity buying the travel on behalf of a customer or guest, such as a corporate travel management company. This entity is responsible for sourcing the room nights.</td><td rowspan="3">Scope 1, 2, and 3 emissions from the total amount of hotel stay and meeting space bookings calculated using the HCMI methodology, apportioning emissions based on facility type and including outsourced laundry</td></tr>
<tr><td>TRAVEL INTERMEDIARY</td><td>An entity involved in the marketing, sales, distribution, transaction of the hotel room night or meeting space rental, such as an OTA, software booking engine, destination management company, or backend application.</td></tr>
<tr><td>EVENT ORGANIZER</td><td>The entity organizing an event, MICE, with generates the demand for the travel and hotel stays, but which may not represent the customer or be involved in the purchase of the hotel stay.</td></tr>
<tr><td>HOTEL AND TRAVEL MEDIA</td><td>An entity that provides B2C or B2B media and communications relating to the hotel industry or wider travel sector, but whose business model is not tied directly to a transaction of travel purchases.</td><td>Scope 1, 2, and 3 emissions from the entity's business travel, calculated using the HCMI methodology,</td></tr>
<tr><td>TRAVEL CARBON OFFSETTER</td><td>An entity that provides or profits from carbon offsetting for consumer or business activities that include hotel stays or wider travel, which may engage consumers for carbon offsetting separately from relation to any other entity in the travel value chain.</td><td>Any carbon offsets transacted relating to hotel stays or meeting space usage should be quantified using HCMI</td></tr>
<tr><td>SERVICE SUPPLIER</td><td>An entity providing a service to a hotel, such as IT support, offsite server, maintenance, consulting, etc.</td><td rowspan="3">To be determined by the entity based on the relationship to the hotel the services provided to the hotel</td></tr>
<tr><td>GOODS SUPPLIER</td><td>An entity supplying goods procured by the hotel such as food, soap, etc</td></tr>
<tr><td>OTHER</td><td>Any other entity involved in the value chain that is not specifically categorized within the above.</td></tr>
</table>

5.2 WHAT INFORMATION ARE HOTEL COMPANIES LIKELY TO HAVE TO PROVIDE TO VALUE CHAIN ENTITIES?

Based on the scenarios above, hotels and hotel companies are likely to receive an increasing number of requests from suppliers, customers and intermediaries who are looking to quantify their Scope 3 business travel hotel stay emissions. The methodology provides the following guidance for providing data:

- All data on carbon emissions should be calculated using the HCMI methodology (see Box 5)
- Ideally hotel companies should provide actual HCMI data for individual or multiple properties as requested
- Hotels should participate in the annual CHSB index (see Box 5) which will mean that their HCMI calculations for each property are calculated and benchmarked, and added to the overall data set for each market that can be used as default coefficients for hotels when granular, property-specific data aren't feasible.

For entities in the value chain who wish to request such data but collecting from individual properties or companies is overly cumbersome or unfeasible, they should:

- Use the published CHSB data which provides average carbon emissions per the HCMI methodology for countries / cities around the world, segmented by asset class and star rating. These industry coefficients can be applied to the number of hotel rooms / meetings booked in order to estimate the total carbon footprint.
- Access wider estimates of HCMI calculations, based on CHSB data, via the Greenview Hotel Footprinting Tool (see Box 6)
- Encourage hotel partners to participate in the annual CHSB index so that the dataset continues to grow and improve
- Ensure that any carbon offsets transacted relating to hotel stays or meeting space usage are quantified using HCMI
- Ensure that offsets transacted in relation to the hotel stay contribute to sustainable tourism (see Section 3)

BOX 5 ***Tools for Estimating the Carbon Footprint of a Hotel Room***

HOTEL CARBON MEASUREMENT INITIATIVE (HCMI) The Hotel Carbon Measurement Initiative (HCMI) is a commonly agreed methodology to measure carbon emissions per guest night or area of meeting space, developed by the hotel industry. Using HCMI to calculate carbon emissions ensures that data and calculations are consistent and comparable across properties and companies. The HCMI methodology and tool is freely available from the Sustainable Hospitality Alliance (www.sustainablehospitalityalliance.org).

CORNELL HOTEL SUSTAINABILITY BENCHMARKING INDEX (CHSB) The Cornell Hotel Sustainability Benchmarking Index (CHSB) is an industry-led global data collection and benchmarking initiative, with data on energy, water and carbon emissions from over 20,000 hotels around the world, available free of charge. The public data set is available from the Cornell Center for Hospitality Research and contains average hotel performance for different types of hotels in different geographies, including HCMI benchmarks. CHSB provides a solution for companies and those buying business travel on their behalf, as well as those offering GHG calculations and offsetting, to estimate in a robust way the carbon footprint of hotel stays and meeting space at scale. (www.greenview.sg/chsb-index)

GREENVIEW HOTEL FOOTPRINTING TOOL For those wishing to estimate the carbon footprint of a hotel stay or meeting in a particular location, the Greenview Hotel Footprinting Tool is a simple to use tool which will make the calculation instantly, using HCMI data from CHSB. A data template is currently being developed so that companies can export data easily into their systems. (www.hotelfootprints.org)

5.3 HOW CAN MULTIPLE COUNTING FOR PURCHASED RENEWABLE ENERGY AND OFFSETS BE ADDRESSED?

Given that net zero requires almost all Scope 3 emissions to be addressed, and that a hotel's and hotel stay's emissions are part of a myriad of entities' boundaries, it is understood that the same hotel or room night may have a carbon offset or Renewable Energy Certificates / Energy Attribute Certificates (RECs/EACs) purchased for it by multiple entities.

This methodology takes the approach of not ruling out multiple acts of purchased carbon offsets and RECs, while also encouraging proper accounting and allocation in order to maximize the benefit and quality of them, as outlined in Box 6.

BOX 6 ***Addressing multiple counting for purchased renewable energy and offsets***

- If one entity within the value chain purchases a valid, retired offset for the GHG emissions of a hotel or a hotel stay, all entities in the value chain can account for that amount of carbon as part of their emissions offset.
- The claim must be related to the amount of carbon offset for the hotel or stay. Where the facility-level data is not available directly, default industry coefficients from the CHSB index should be used.
- Hotel owners and operators can only account for carbon offsets purchased by another entity as relating to the limit of their Scope 1 and 2 emissions thresholds per year, and not to the hotel's own Scope 3.
- Offsets allocated to the hotel for the year in excess of the annual Scope 1 limits cannot be carried over to subsequent or prior years until after 2030 or more established guidance, standards, and registries exist.
- The entities should not subtract or net-out the emissions reduced from offsetting. They should disclose them separately in terms of the total emissions and the total offsets related to those emissions.
- In the case of Renewable Energy Certificates, the same applies but the threshold is up to 100% of the hotel's electricity (or other energy if a non-electric REC is sourced) per year and not carried over, unless purchased by the hotel owner or operator through a contractual instrument with a utility or PPA that adjusts for each year's estimates.
- Hotels should seek to maximize communication across the value chain for their purchase of RECs and impact to lower their HCMI figures, as well as include this information in submission of annual data to the CHSB Index so that the default coefficients accurately reflect the activity data of the hotels in each geography.

As the implications of large Scope 3 emissions accounting and decarbonization efforts unfold, challenges with multiple counting will likely emerge not only for the hotel industry but the wider travel industry as well as many other products and services outside it. Lack of collective action among the industry (as well as the reverse outcome that no entity can account for the purchased RECs or offsets of another entity for the same source of emissions) will result in confusion, inefficient use of resources, and multiple instances of purchases for the same emissions.

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NEXT STEPS

This Summary of the Net Zero Methodology for Hotels provides an initial understanding of the challenges and key issues involved for hotel companies or properties which wish to set a net zero commitment or pathway.

For a simple guide on how to get started with a net zero strategy, please refer to the Practical Guide to Getting Started, available from www.greenview.sg.

For a more in-depth discussion and further clarifications on each item, refer to the full methodology which is available also from www.greenview.sg. The document contains a wealth of background information on a large range of topics to help users gain a deeper understanding of the various elements required to achieve net zero, resources available and how the methodology was developed. These include:

- **Understanding the concept of GHG emissions scopes:** including an item by item alignment with GHG Protocol Scope 3 and how it relates to hotels
- **Universe of Scope 1, 2 and 3 GHG emissions sources for a hotel**: a comprehensive list of emissions sources related to a hotel with examples of where they occur and a default classification (high, medium, low or out of bounds) to guide prioritization
- **Methodology alignment** with the UN Race to Zero, Science Based Targets initiative, SME Hub and Glasgow Declaration : an easy to use reference of how the methodology aligns with other net zero frameworks
- **Purchased renewable energy and addressing market-based emissions:** detailed guidance on renewable energy, energy attribute certifications (EACs) and Scope 2 quantification and accounting
- **Emissions factors, coefficients, and default data for quantification:** a comprehensive list of sources
- **The purchased chilled water conundrum:** discussion on how to address and quantify emissions from chilled water
- **A net zero carbon offsetting strategy for the hotel industry:** detailed guidance on how an industry-wide approach to carbon offsetting can be adopted
- **Portfolio extrapolation methodology:** a methodology for filling portfolio data gaps, as set out in the Hotel Waste Measurement Methodology (available at www.hotelkitchen.org)
- **Upstream emissions -Embodied carbon in hotel buildings, FF&E, and Food and Beverage:** detailed description of challenges and opportunities in determining upstream emissions
- **Industry tools to calculate the carbon footprint of hotels, and how to use them:** including the Hotel Carbon Measurement Initiative (HCMI), Cornel Hotel Sustainability Benchmarking Index (CHSB) and Greenview Hotel Footprinting Tool – for more information visit www.greenview.sg/chsb-index
- **Opportunities for further work:** an outline of the areas where further work will enhance the methodology and where additional data is needed to support hotels move towards net zero
- **Frequently asked questions:** during the development of the methodology stakeholders raised many questions and clarifications which are addressed as a series of FAQs
- **Stakeholder Engagement:** description of the stakeholder engagement process, Advisory Group members and wider stakeholder consultation
- **References and Resources:** a full bibliography
- **Glossary:** list of common terms used in the methodology

Greenview is the world's leading provider of sustainability programs and data management for the hospitality and tourism sector. Greenview supports dozens of companies to design, implement, and monitor their corporate responsibility and sustainability platforms to drive profitability, streamline data, keep ahead of trends, and provide effective communication for stakeholders. Greenview has developed industry methodologies for carbon, waste and plastics measurement.

Tourism Declares is a global community of over 300 organisations, companies and professionals working together to plan a better future from tourism. All members have committed to align their plans with the need to cut global emissions in half by 2030.

Pacific Asia Tourism Association (PATA) is a not-for-profit membership-based association that acts as a catalyst for the responsible development of travel and tourism to, from and within the Asia Pacific region. By bringing together private and public sector members, PATA facilitates meaningful partnerships to enhance the value, quality and sustainable growth of travel and tourism to, from and within the Asia Pacific region.

Sustainable Hospitality Alliance (the Alliance) brings together engaged hospitality companies and uses the collective power of the industry to deliver impact locally and on a global scale. They work with leading hospitality companies and strategic partners to address key challenges affecting our planet and its people, and develop practical resources and programmes to enable the wider industry to operate responsibly and grow sustainably.

World Travel & Tourism Council (WTTC) is the global authority on the economic and social contribution of Travel & Tourism. WTTC promotes sustainable growth for the Travel & Tourism sector, working with governments and international institutions to create jobs, to drive exports and to generate prosperity. Council Members are the Chairs, Presidents and Chief Executives of the world's leading private sector Travel & Tourism businesses.

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