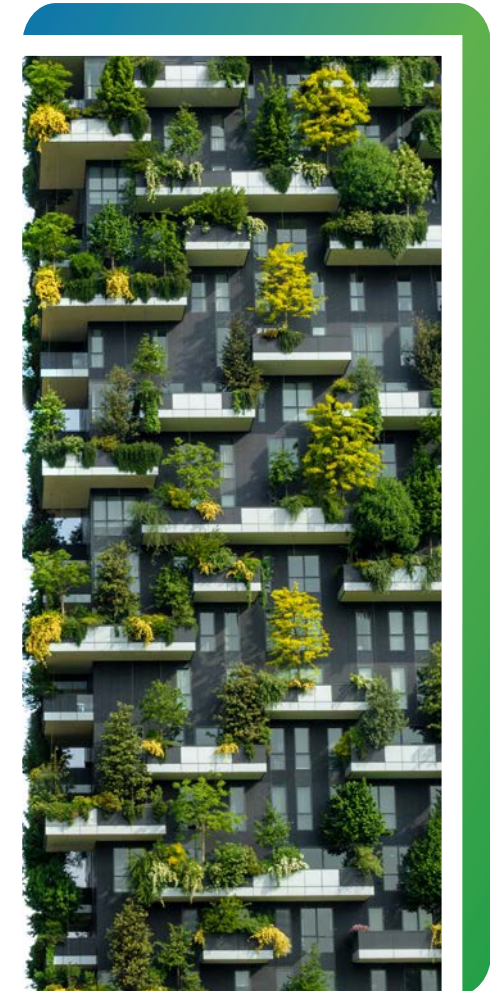


# NET ZERO METHODOLOGY FOR HOTELS

2<sup>ND</sup> EDITION • JUNE 2023

  
GREENVIEW



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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 it is constantly evolving. Dozens of 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.

This joint initiative among Greenview, the World Travel & Tourism Council, the Pacific Asia Travel Association and the Sustainable Hospitality Alliance aims to define mutual objectives for the broader benefit of the hotel industry as well as travel and tourism.

Specifically, this methodology has been developed to support hotels and the wider hotel industry as stakeholders seek to make net-zero commitments and take action to achieve 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.



## OBJECTIVES OF THE METHODOLOGY

- 1 Serve as the referential methodology** that can be used by all stakeholders in the tourism value chain when addressing net zero in developing, owning, operating, franchising, booking, and staying in hotels, recognizing that multiple entities will ultimately be responsible for decarbonizing the same sources of emissions.
- 2 Define both the default boundaries and parameters** for how hotel companies and hotel properties can quantifiably achieve net zero as well as interim progress milestones, including the defined Scope 3 (value chain) emissions boundary for a hotel owner or operator of any size, from individual properties to larger chains.
- 3 Define a common approach, including roles and responsibilities,** for addressing and accounting for the overlap of purchased renewable energy and carbon offsets for a hotel property as it affects the hotel owner, hotel operator, hotel franchisor, travel buyer, travel intermediary, and destination across aspects of Scope 1, 2, (operational and financial control) and 3 (purchased goods and services, business travel, and franchised properties).
- 4 Serve as a resource** for supporting applications, planning, and disclosures necessary for entities using general frameworks such as SBTi, SME Climate Hub, and the Glasgow Declaration by providing specific context, approach, and rationale for decarbonization of hotels and hotel companies and itemized alignment with these frameworks.
- 5 Provide information for other organizations in the value chain** as hotels and accommodations are part of Scope 3 for other companies. This methodology helps in communicating better data on various aspects of GHG accounting and thereby helps in setting an example for other industries that are undertaking similar initiatives on decarbonization.

### THIS 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
- Understanding how the hotel's emissions will relate to the wider value chain of tourism and real estate
- Commencing the net-zero planning for a commitment.

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**KEY CHANGES TO SECOND EDITION**

The First Edition of this methodology was developed in a joint initiative among 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 from hotel companies around the world, with broad stakeholder consultation<sup>1</sup>. This First Edition of the Net Zero Methodology for Hotels incorporated input and feedback from these groups.

The Second Edition builds off the first to continue as a leading, freely available resource for hotels and hotel companies that wish to pursue decarbonization to utilize in part or in whole. The Second Edition updates the sources, learnings and developments that were observed on climate action in the past year. The Steering Committee members in the Second Edition include WTTC, PATA, Sustainable Hospitality Alliance and Greenview. The Second Edition has also incorporated feedback from practitioner panel<sup>2</sup> members of hotel organizations that used the methodology to implement net zero goals. In addition, the methodology also addressed feedback received from the stakeholder consultation.

Some key changes or additions in this Second Edition are as follows:



**COMMUNICATING DATA & INFORMATION IN OTHER VALUE CHAINS**

This methodology provides the most comprehensive net zero guidance covering every aspect of the hotel industry's value chain. As more hotels globally use this methodology to set their net zero targets and goals, they will enhance their data coverage and quality of Scope 1, 2 and 3 emissions. Collaboration will not only help the hotel industry to decarbonize, but also it will also help other industries, as hotels are part of a larger economic network due to business travel.

A key example would be the events industry, as it is observed that events generate significant levels of emissions. To address this, Net Zero Carbon Events, launched at COP 26, is an industry-wide initiative that showcases the events industry's commitment to addressing climate change. Net Zero Carbon Events has developed a roadmap with the aim of bringing the global events industry together on a common journey to Net Zero by 2050. The initiative has identified five key action areas where collaborative effort is needed to decarbonize. The initiative has recognized that travel and accommodation contribute to a majority of the total emissions from events. Therefore, the initiative intends to work with accommodation providers and hotel organizations to:

- Quantify the emissions from their attendees' hotel stays
- Minimize the emissions from their hotel stays
- Identify opportunities for attendees to offset their carbon footprint
- Promote and incentivize sustainable hotels

In this context, the methodology will help hotels to not only set net zero targets by quantifying their value chain emissions but also share information (as per metrics outlined in section 4) with the events industry and collaboratively fulfill shared initiatives on climate action.



<sup>1</sup> See Appendix Q for list of groups that responded to the industry consultation.  
<sup>2</sup> See Appendix Q for list of practitioner panel members.

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**IMPLEMENTING THE METHODOLOGY**

This Net Zero Methodology for Hotels is intended to provide comprehensive guidance on how a hotel company should approach setting their net zero pathway with full discussion and rationale for suggestions made and decisions to be taken. The appendices provide further detailed information and guidance on key topics which are referred to in the methodology and which will need to be addressed as the net-zero process is undertaken.

In order to operationalize the methodology, an accompanying “**Practical Guide to Getting Started for Companies and Hotels**” has been produced. These guides sets out the steps to be taken once the methodology has been reviewed and digested, to model the pathway, obtain buy-in from stakeholders, address Scope 1, 2 and 3 emissions, establish ongoing processes, and then make and publicize the commitment. Figure 1 provides an overview of these steps.



▼ **Figure 1** Overview of steps in “Practical Guide to Getting Started”



# SECTION 1: HOTEL BASELINE AND TARGET

## 1.1 UNDERSTANDING THE BASELINE

Net zero is a type of **emissions reduction target** (or **carbon target**) to achieve. The concept of carbon targets is not new, with many hotel companies having first set targets over a decade ago. Setting carbon targets starts with the concept of a **baseline value**<sup>3</sup> against which progress can be measured over time. While the concept of a “baseline” was originally intended to develop scenarios, including a “business-as-usual” scenario with no mitigation measures vs. action-oriented scenarios to achieve reductions, in common practice and use in frameworks, the **baseline** typically consists of a year and its corresponding carbon emissions, from which progress will be measured going forward. In these earlier times of setting carbon targets, the focus was on merely having one to demonstrate a credible approach to climate change, addressing it similarly to how other financial targets were set as part of good business. Carbon targets were set managerially, where the company would evaluate and arrive at a percentage of carbon reduction it could achieve over a specific period via good management and implementation of best practices. Baseline and target years were also not standardized, as companies could choose any year for the baseline and any year for the target, or a series of years to demarcate interim targets toward a final target year.

With the advent of science-based targets and global climate agreements, expectations increased to view setting a safe, managerially attainable carbon target as insufficient, unless the target was aligned with the level of decarbonization required to meet the science of climate change mitigation. Figures were derived from the IPCC reports and agreements set forth in the Paris Agreement on the 2-degree scenario<sup>4</sup>, which were translated into industry terms by frameworks such as the Sectoral Decarbonization Approach (SDA) that standardized carbon budgets and reduction from a 2010 baseline, and the International Energy Agency (IEA)’s Energy Technology Perspectives that modeled from a 2014 baseline.

The Science Based Targets initiative (SBTi) set a framework for corporate target-setting, whereby the baseline needed to be modeled or adapted from 2010 figures, target years needed to be between 5 and 15 years from the baseline, and percentage reduction aligned with the corresponding sector’s decarbonization pathway toward 2050. This required more complex modeling and definition of the boundary of emissions to define the baseline and target. More importantly, it implied increased internal analysis and buy-in for committing to significant systemic shifts in operations and investments that would be needed to achieve such an ambitious target that was not easily attainable by business-as-usual practices.

<sup>3</sup> Baseline value refers to the value against which change is measured. ‘Baseline scenarios’ are based on the assumption that no additional policies/measures will be implemented beyond those that are already in force and/or planned. They are counterfactual constructions that help highlight the level of emissions that would occur without further mitigation effort. Other terms that are often used interchangeably include ‘reference scenario,’ ‘no policy scenario,’ and ‘business as usual (BAU) scenario.’ However, the term ‘BAU’ is no longer preferred due to the difficulties in projecting century-long socioeconomic circumstances. While baseline measurements are a fundamental part of science, emission baselines were mainstreamed by global agreements such as the 1997 Kyoto Protocol which uses emission data from 1990 as the baseline value.

<sup>4</sup> The 2-degree scenario is widely accepted as the limitation to global average temperature growth to prevent significant changes to the planet. One of the goals of the [2015 Paris Agreement](#) is to limit global average temperature to well below 2°C above pre-industrial levels, and to pursue efforts to limit temperature increase to 1.5°C.

## SETTING A PATHWAY FOR HOTELS TO ALIGN WITH THE PARIS AGREEMENT

While the movement toward “net zero” has evolved over the past year, the hotel sector first tackled decarbonization at the industry level through **The Global Hotel Decarbonization Report**<sup>5</sup> published by the Sustainable Hospitality Alliance (formerly International Tourism Partnership) in 2017. The report states that in order to keep pace with the requirements of a 2-degree scenario, and taking into account the industry’s growth trajectory, the global hotel industry will need to reduce its Greenhouse Gas (GHG) emissions per room per year by 66% from 2010 levels by 2030 and by 90% by 2050. Since the publication of this document, several hotel companies have set science-based targets, and others have announced net-zero commitments. In addition, Tourism Declares a Climate Emergency was launched in 2020 as a campaign to galvanize support from the tourism sector, including hotels, for setting reduction targets in line with the Paris Agreement. As a further development, the Glasgow Declaration on Climate Action in Tourism was launched in November 2021.

With the advent of net zero, the objective is more straightforward: **zero carbon emissions**, achieved by keeping emissions to an absolute minimum, and addressing the remainder via removals and offsets. The target year is also clear: 2050 planet-wide at the absolute latest, and as early as possible with 2040 being an accepted organizational-level goal<sup>6</sup>. While the ultimate goal is essentially 100% reduction from a baseline, setting a baseline year is necessary to track progress toward the target over time as well as to benchmark performance.

This section sets out the issues which should be addressed when determining a baseline.

<sup>5</sup> Global Hotel Decarbonization Report is available from [www.sustainablehospitalityalliance.org](http://www.sustainablehospitalityalliance.org)

<sup>6</sup> Paris Agreement



### 1.1.1 SETTING A BASELINE YEAR

Companies tend to choose a baseline year that allows them to show most progress. This may include:

- A particularly good year for business, where emissions are higher due to high occupancy and consumption.
- A year prior to a period 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.

As net zero is commonly discussed as a “percentage reduction toward net zero” with a rule-of-thumb interim target of “halving emissions by 2030”, it is more advantageous for a typical hotel or portfolio to set as early a baseline year as possible. Conversely, when frameworks are structured in terms of annual absolute reductions from a baseline year, it is more advantageous to set the latest baseline year possible. Finally, changes in frameworks and expectations can cause the need to modify the baseline year or set multiple years for different frameworks.

To provide guidance and simplify for comparison, for this methodology an organization can use its existing baseline or choose any baseline year “best fit,” which is classified into one of the following periods:

- **OG<sup>8</sup> 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<sup>9</sup> 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.

Depending on which year is set, the methodology sets out more specific expectations for percentage progress toward net zero in section 2. However, as a benefit of the net-zero concept, many of the yardsticks and ultimate goals are the same regardless of baseline year.

### 1.1.2 ABSOLUTE VS. INTENSITY TARGETS

**For the purposes of net zero for hotels, the baseline should be communicated at a minimum in an intensity figure as well as an absolute figure** for both individual hotels and for portfolios of hotels. Progress should be measured and communicated alongside the intensity reductions and corresponding

percentage progress toward net zero so that the actual footprint can be analyzed and compared. 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.

### 1.1.3 INTENSITY METRICS

**The intensity metric of floor area, expressed in kgCO<sub>2</sub>e/SqM, should be used for Scope 1 & 2 emissions as well as those directly relating to the building and the aggregate of all sources.** Scope 3 emissions that are driven more directly by occupancy or by other factors may use additional metrics.

Hotels may choose to utilize additional metrics of intensity to track and portray progress that is seen as more relevant for comparison among peers and over time. Examples of these are intensity metrics such as per square foot, per occupied room, per available room, per room, per guest night, per dollar of total revenue, and per daily rate. The floor area intensity metric is preferable for being consistent with common practice in real estate, alignment with the intensity metrics designated for service buildings in the Sectoral Decarbonization Approach, and demonstrative of the largest driver of carbon emissions over time (growth in the floor area of a portfolio).

### 1.1.4 CHANGES IN THE BASELINE

**For a single hotel, the baseline may need to be changed if the hotel undergoes a structural change that will skew its perception of progress,** for example, a renovation adding an additional wing of guestrooms, meeting space, or restaurant. Some changes will also greatly affect the carbon footprint of the building such as outsourcing laundry or switching to onsite combined heat and power cogeneration. However, with net zero the goal is still the same, so the hotel can adjust its baseline accordingly, but the target year or yardstick progress toward net zero should still remain the same.

**For portfolios of hotels, the baseline becomes more problematic.** Many hotel owners and operators are constantly changing their portfolios, acquiring and selling hotels, adding to their brand and having them de-flagged, and at times merging with portfolios. According to the Greenhouse Gas Protocol (GHG Protocol), a company can adjust its baseline if a material change over 5% to its business occurs. In hotel companies this is a constant, as growth of a portfolio will exceed 5% of total room-count every few years, and owners may acquire or sell a hotel that itself is more than 5% of the total floor area.

**For this net-zero methodology, a static baseline is recommended,** where the absolute figure remains unchanged, as does the intensity of kgCO<sub>2</sub>e/SqM in the baseline year which remains the figure against which any current year’s intensity performance is measured. Static baselines remove the need for heavy year-to-year recalculations of all prior and forecasted emissions, reduce the need for internal re-approval and socializing of targets and budgets, and make progress more easily understood by stakeholders. However, there are some scenarios where the baseline may need to be re-evaluated, as shown in Figure 2.

<sup>7</sup> According to the [2018 IPCC Special Report](#) on the impacts of global warming of 1.5°C above pre-industrial levels, global carbon emissions would need to fall by about 45% from 2010 levels by 2030 to limit warming to 1.5°C. This has since been accepted as a pathway to net zero by 2050.

<sup>8</sup> Old Guard Baseline

<sup>9</sup> [Long-term decarbonization](#) refers to a strategy with a long time horizon toward 2050. Such strategies are needed to achieve the Paris Agreement goal of limiting global average temperature to 1.5°C relative to pre-industrial levels. To do so, there is scientific consensus that carbon emissions have to be reduced by half by 2030 and reach net zero by 2050.

▼ **Figure 2** Scenarios where a baseline may need to be reviewed

**SCENARIOS WHERE A BASELINE MAY NEED TO BE REVIEWED**

Several scenarios exist where a hotel owner, operator, and/or franchisor of hotels may need to reevaluate and update its original baseline and corresponding target values. These include:

- **A merger or acquisition of a large portfolio of hotels** that significantly changes the composition of the portfolio’s geographic location or asset class mix; or conversely a large disposition, exit, or spin-off of part of the portfolio that has similar effects (as is outlined in the GHG Protocol).
- **Cumulative, organic growth changes the constitution of the portfolio significantly over time**, such as change in proportion of regional representation, or segment/type, such as increasing representation of full-service resorts in comparison to limited service urban hotels.
- **Correction due to significant errors in prior years**, or due to increased data quality that alters previous extrapolation values.
- **Change due to updating of methodology or sources** of calculation of emission factors that result in large changes of intensity, such as switching to residual mix sources.
- **Scope 3 emissions become 40% or more of aggregated Scope 1, 2 and 3** due to changes in calculation methodology or sources. Also when specific Scope 3 emission categories increase or decrease the % of overall Scope 3 emissions.

Alternatively, though more cumbersome for calculation, planning and monitoring, scenarios exist where it would be more appropriate to add an additional baseline and calculations for part of the portfolio, such as private equity owners with distinct funds, large subsidiary restructuring, or acquisitions of significant portfolios that have distinct traits and decarbonization pathways.

**1.1.5 BASELINE FOR SCOPE 3 EMISSIONS**

As will be outlined in the next section, **Scope 3 emissions from the hotel building, operation, and activities will also need to be addressed in a net-zero plan.** These sources of emissions are diverse, not as easily quantified, and not necessarily correlated to the ongoing operation or floor area of the building.

- For franchisors of hotels, the baseline should follow the same logic as above.
- For Scope 3 emissions tied specifically to building operation, a baseline should be set, once available, in the absolute or intensity metric most appropriate. This baseline may be the same as the Scope 1 & 2 baseline, or a different year in the case of sufficient data and common quantification approaches only becoming available years later.





## SECTION 2: THE GHG EMISSIONS BOUNDARIES OF A HOTEL

The next step toward net zero is to determine the boundaries of the 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. For further details on the concept of scope, and the full list of potential sources of GHG emissions in a hotel, please refer to Appendix C.

The Scope 1 & 2 GHG emissions quantification of a hotel is primarily centered on heating, cooling, and lighting of the building and powering 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 upstream and downstream emissions from purchase and use of ongoing consumable goods such as bathroom amenities and 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.

### 2.1 THE GHG EMISSIONS BOUNDARIES OF A HOTEL

The GHG emission boundaries suggested in this methodology are aligned with the boundaries for the emission scopes and sources as set out in the GHG Protocol, outlined specific for the hotel industry. The GHG boundaries and approach laid out are also in line with the criteria of the Glasgow Declaration, UN Race to Zero campaign and Science-based Targets initiative (SBTi). For further detail on alignment of this methodology with the UN Race to Zero and the SBTi, see Appendix E.

#### 2.1.1 SCOPE 3 EMISSIONS APPROACH

Net zero's primary enhancement to the discipline of carbon reduction is the implication of encompassing wide Scope 3 – or value chain – emissions. While using a default percentage-based threshold (i.e., the need to include at least 65%-95% of a company's Scope 3 emissions) is a good starting point in general, it presents several challenges and redundancies in how it will play out over time for a hotel or hotel company.

This methodology seeks to provide clarity and a common approach for the hundreds of potential sources of emissions occurring within a hotel and the value chain of its operation and ownership as identified in Appendix C.

In the hotel industry, scalability and acceleration of practices are needed, which can be obfuscated by constant flux in Scope 3 thresholds. Here are just few examples that companies would consider for Scope 3 evaluation:

- **Exactly where to draw the line on Scope 3** is extremely challenging considering all the potential sources listed in Appendix C.
- **For franchisors of hotels, Scope 3 emissions may represent a wide range of the total percentage of common Scope 3 categories**, and in some cases above 90% of total Scope 3. As such, a pure percentage threshold creates a significant divergence in the expectations of a hotel franchisor in comparison to a non-franchisor. A hotel operator with no franchised properties, managing primarily resorts that house staff and generate power onsite, may see its food and beverage emissions represent almost all Scope 3 emissions. An operator of limited-service domestic U.S. hotels in secondary and tertiary markets may find

its employee commuting represent almost all of Scope 3. Portfolio composition with franchises also can create challenges. For example, should a hotel company that increases its franchised portfolio at a more accelerated rate over time compared to its managed portfolio suddenly be able to reduce targets to other Scope 3 emissions previously addressed in targets as the franchise portion increases? Conversely, if franchised portfolio emissions decrease, would the franchisor need to reassess and integrate additional Scope 3 categories?

- **Even when deciding a boundary and conducting an analysis, calculation methods vary widely** for quantifying Scope 3 emissions. Depending on the approach and emission factor, a source such as waste emissions or employee commuting may be a large part of Scope 3, or a minor one when using the same source data set.
- **As methodologies change, calculations may change and the ability to address them may as well.** Transmission and distribution losses from electric power may be a significant source of Scope 3 for a non-franchisor, but guidance is lacking on how to address T&D losses in market-based accounting using residual mix emission factors, and how to address them with purchased certificates. Likewise, as residual mix emission factors currently available are highly volatile, the relative percentage of T&D losses may fluctuate significantly.
- **Interpretation of the GHG Scope 3 protocol for embodied carbon and useful life accounting emissions of commercial buildings can cause significant variation in Scope 3 composition.** If a hotel owner completes a new development and is expected to address all embodied carbon emissions the year it is completed, those emissions may dwarf other Scope 3 that year. The approach is also somewhat inconsistent with the actual process of hotel construction in which purchases and construction operations may be undertaken over 2-5 years, with emissions actually occurring over that period. Similar year-on-year skewing may occur if the owner sells a hotel and is expected to account for the useful life emissions of the hotel thereafter. It is then in the company's best interest to choose a baseline year or range where it sells a lot of hotels in a disposition/exit cycle to inflate its Scope 3 baseline, and thereby more easily demonstrate decarbonization progress.
- **Some of the most common sources of emissions in a hotel may either be Scope 3 or within Scope 1 & 2, depending on the configuration.** The two most common are laundry wash and hotel-organized guest transportation. By strict GHG protocol alignment and SBTi near-term strategy, a hotel can reduce its Scope 1 & 2 boundary and target ambition just by outsourcing laundry wash and its airport shuttles after setting its baseline. While net zero would imply these are encompassed regardless, the need for threshold quantification in relation to other sources could be seen as redundant.

To address these challenges and nuances, the methodology provides a classification system to arrive at default categories that at an industry level will represent over 90% of typical Scope 3 emissions within a reasonable boundary. In doing so, the intention is to enable the hotel and wider travel industry to focus efforts on collectively pursuing decarbonization actions for the most relevant and significant sources of emissions consistently, rather than endeavoring in seemingly endless inventorying, evaluating, and adjusting emission calculation sources and setting related targets for thousands of items over the next several years, during which tools evolve and each respective supplier's industry improves calculations and data flows to enable more accurate calculation.

## 2.1.2 CLASSIFICATION OF HOTEL EMISSIONS

Based on the classification methodology, which is outlined in more detail in Appendix C, a default hierarchy for the sources of emissions of a hotel is shown in Table 1.

▼ **Table 1** Default Hierarchy for Emissions Sources of a Hotel

CLASSIFICATION	APPROACH	EXAMPLES
<b>VERY HIGH</b>	<ul style="list-style-type: none"> <li>■ 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</li> <li>■ Quantifiable targets should be set, and decarbonization should be prioritized first within interim milestones</li> <li>■ Processes and engagement should be prioritized as soon as possible</li> </ul>	<ul style="list-style-type: none"> <li>■ Stationary combustion of primary fuels</li> <li>■ Purchased electricity</li> <li>■ Purchased heating and cooling (when present)</li> <li>■ Upstream emissions from the most significant sources of purchased F&amp;B and OS&amp;E</li> </ul>
<b>HIGH</b>	<ul style="list-style-type: none"> <li>■ Sources of emissions should be quantified based on actual data, particularly if part of the hotel's Scope 1 &amp; 2 emissions boundary</li> <li>■ Efforts should be pursued to improve calculation resources and methodologies when needed in order to arrive at quantifiable targets</li> <li>■ Quantifiable targets should be set once sound calculation methods and resources are available, and decarbonization approaches made more apparent through engagement targets</li> <li>■ Processes and engagement should be prioritized, when planning/engagement is available, within interim milestones as early as possible</li> </ul>	<ul style="list-style-type: none"> <li>■ Laundry wash (when outsourced)</li> <li>■ Emissions from waste disposal and treatment</li> <li>■ Embodied carbon emissions of the most significant sources of building envelope and FF&amp;E</li> <li>■ Employee commuting</li> </ul>
<b>MEDIUM</b>	<ul style="list-style-type: none"> <li>■ Sources should be quantified but may be estimated using default data</li> <li>■ General processes and engagement should be developed within reason</li> <li>■ Targets should follow a decarbonization pathway by 2050</li> </ul>	<ul style="list-style-type: none"> <li>■ Transportation of guests arranged by the hotel within the destination (when present)</li> <li>■ Transmission &amp; Distribution losses from electric power distribution to the hotel</li> <li>■ Business travel</li> <li>■ Other significant sources of purchased OS&amp;E and F&amp;B</li> </ul>
<b>LOW</b>	<ul style="list-style-type: none"> <li>■ Sources may be excluded from calculated boundary</li> <li>■ When significant for a particular hotel or company and included, quantification can be done using estimated or proxy data</li> <li>■ General processes and engagement should be developed within reason</li> <li>■ If present by 2040, targets should include that emissions be offset as residual emissions when related to the building, or by 2050 for others</li> </ul>	<ul style="list-style-type: none"> <li>■ Fugitive emissions from refrigerant leakages</li> <li>■ Other combustion of fuels when used for secondary purposes and insignificant in comparison to the rest of the hotel's Scope 1 &amp; 2 emissions</li> <li>■ Transportation of guests arranged by the hotel to/from the destination</li> <li>■ Other upstream emissions of purchased goods and services and capital equipment</li> </ul>
<b>OUT OF BOUNDS</b>	<ul style="list-style-type: none"> <li>■ 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</li> </ul>	<ul style="list-style-type: none"> <li>■ See Appendix C for full list of items</li> </ul>

### 2.1.3 DEFAULT NET-ZERO HOTEL EMISSIONS BOUNDARY

In order to achieve net zero, a hotel should include the above sources of GHG emissions in its net-zero plan as set out in Table 2. For each category, the hotel should have both a **quantifiable reduction target and a planning and engagement target**, and build in timing considerations for phasing in of Scope 3 significant sources based on the owner/operator distinction. The methodology recognizes that the timeline proposed in Table 2 may be challenging and may require additional investments, however given the urgency to address net zero, it is considered to be aligned with latest climate science

**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:**

- 1 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.
- 2 Scope 3 Quantified 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 by 2025 at the latest, and the baseline year set at the year closest to the Scope 1 & 2 baseline for which credible activity data are available, but no later than 2025.
- 3 Scope 3 Quantified 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.

Note that the above does not necessarily mean that the base years should be “2025” and “2030,” but instead means that reporting and quantification on some of the categories of Scope 3 can be deferred to 2025 and 2030. The base year for Scope 3 could in fact be any year in line with reporting requirements of the net zero framework. It is also encouraged that companies may quantify these as early as possible to ensure a more comprehensive emissions profile.

**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 guests which are reflected in the operation of 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.



▼ **Table 2** Boundary of GHG Emissions for Net Zero for a Hotel Owner and Operator

SCOPE	SOURCE	DEFAULT CLASSIFICATION	TO BE INCLUDED FROM	QUANTIFICATION APPROACH	QUANTIFICATION DISTINCTION
1	Combustion of fuels onsite	<b>VERY HIGH</b>	Initial Baseline	Actual data gathered for fuels used to heat the building via HVAC systems, to use in cooking equipment, or as primary source of onsite electricity generation	
2	Purchased electricity	<b>VERY HIGH</b>	Initial Baseline	Actual data gathered	
3	Upstream emissions from ongoing consumable F&B <sup>10</sup> and OS&E <sup>11</sup>	<b>VERY HIGH</b>	2025 or 2030	Estimated based on best-available coefficients, for the most impactful and commonly sourced items such as beef, once sufficient default data are available by 2025, with others deferred to 2030 based on available data and further separation of this category into sub-categories or specific items	Operator
2	Purchased heating and cooling	<b>HIGH</b>	Initial Baseline	Actual data gathered, when present at the hotel	
3	Emissions from outsourced laundry wash	<b>HIGH</b>	2025	Estimated using best available data or coefficients, when laundry wash is outsourced	Operator
3	Emissions from downstream waste disposal	<b>HIGH</b>	2025	Estimated based on coefficients from actual waste generation and disposal data, once sufficient GHG emissions from waste disposal are available globally following the WWF Hotel Waste Methodology When treated onsite, categorized as Scope 1 and related to actual activity data	Operator, unless waste is treated onsite and categorized as Scope 1
3	Embodied carbon emissions of the building, land use change, and upstream FF&E <sup>12</sup>	<b>HIGH</b>	2030	Estimated based on best-available coefficients and determination of a boundary of most impactful materials and processes to be included, such as concrete and steel, once sufficient data is available to itemize the specific components and the overall LCA figures. Potentially includes land use change if significant	Owner
3	Employee commuting	<b>HIGH</b>	2030	Estimated based on property or market-specific default data done in sampling studies as well as more detailed methodology and granular city-level coefficients available	Corresponds to the employees of each respective entity only
3	Transportation of guests arranged by the hotel within the destination	<b>HIGH</b>	2025	Estimated based on best-available coefficients using some level of activity or usage data, unless significant and actual data should be used	Operator
3	T&D <sup>13</sup> losses from purchased electricity	<b>MEDIUM</b>	Initial Baseline	Actual data gathered for electricity, using best available emissions coefficients	
3	Business travel	<b>MEDIUM</b>	2025	As best available based on travel providers, transportation or property-specific coefficients, or estimated based on coefficients derived from default data. Note that business travel to hotels within the same portfolio boundary of the company should not be included as they are already part of that hotel's emissions boundary.	Corresponds to the employees of each respective entity only

10 Food & Beverage  
11 Operating Supplies & Equipment  
12 Furniture, Fixtures & Equipment  
13 Transition & Distribution Losses

SCOPE	SOURCE	DEFAULT CLASSIFICATION	TO BE INCLUDED FROM	QUANTIFICATION APPROACH	QUANTIFICATION DISTINCTION
1	Fugitive emissions from refrigerant leakages	LOW	N/A	Excluded by default from quantitative targets, otherwise estimated, or actual data gathered for emissions from refrigerant leakage when significant in comparison to the rest of a hotel's Scope 1 & 2. However, exclusion should also be accompanied with appropriate rationale on why fugitive emissions have been excluded either through an inventory composition analysis, etc.  Include in planning and engagement targets for addressing low-carbon refrigerants and effective management	
1	Other combustion of fuels	LOW	N/A	Excluded by default from quantitative targets, otherwise estimated or actual data gathered for other combustion of fuels when used for secondary purposes and significant in comparison to the rest of a hotel's Scope 1 & 2  Include in planning and engagement targets for addressing these sources	
1	Transportation of guests arranged by the hotel to/ from the destination	LOW	N/A	Excluded by default, unless in the exception of being significant as part of the hotel's business model  Include in planning and engagement targets for efforts to build awareness and support carbon reduction and mitigation efforts from travel	

#### 2.1.4 OWNER AND OPERATOR CONTEXT OF THE BOUNDARY

After defining the emissions boundary of a hotel, the responsibility for accounting for and decarbonizing the emissions needs to be determined. While **franchises** are a clearly defined category in the GHG Scope 3 Protocol, the distinction between the entity that owns the hotel as a physical asset and the entity that operates of the hotel is not as straightforward. It is common for hotel owners to report their emissions and associated carbon targets using the financial control approach of the GHG protocol as they own the asset, are responsible for funding and maintaining its CAPEX, and include the hotel's P&L in its financial reporting. On the other hand, hotel management companies use operational control in their reporting and target-setting, as they operate the building and its use. As a result, inherent double-counting exists as both entities tend to claim energy-related emissions as their Scope 1 & 2 since the owner owns the equipment but the operator turns it on and off.

However, allocation of emissions from the hotel's value chain is more complex. For example:

- The operator may not have had any influence or decision in the embodied carbon of the hotel, but has some influence in the choice of FF&E.
- The owner of the hotel may change hands as one owner sells to another, so the prior and current emissions of the hotel are still allocated to the same operator, but differ for the owner. Or conversely, the owner may change the operator and the new operator inherits the building's structure, systems, and other aspects that affect emissions but are outside the operator's control.
- Operators may not be able to implement emissions reductions activities without owner approval of budget that requires additional operating expenses.

- Hotel Management Agreements may be structured so that an emissions reduction project decreases carbon for both entities where the investment in efficiency is funded by the owner, but the operator benefits disproportionately from the financial savings that result.
- Owners may not be able to influence the operational staff practices that reduce emissions due to tax structures or other requirements, or the ongoing consumable purchases due to brand standards. In other cases, owners may have full influence over staffing decisions, operational procedures, and procurement choices.
- Owner may also be required to do operational control and thus all the hotels emissions would be its scope 3 (for example reporting to GRESB).



To address this structure and myriad of scenarios consistently for the hotel industry, **the owner and operator should understand that they are responsible for all the emissions within the boundary of the hotel to some degree and should include actions to support the decarbonization of the emissions in their net zero plans.** However, when it comes to the quantification boundary, accountability for some sources should fall on one of the two entities. **One entity should be responsible for the quantification and setting of respective targets, while the both entities 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 include the value chain emissions resulting from the activities of employees and guests which are reflected in the operation of 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.

For further context, explanation, itemization, and examples, see Appendix B.



### 2.1.5 ADDITIONAL COMPANY-LEVEL CONSIDERATIONS FOR COMPANIES THAT OWN, OPERATE, FRANCHISE PORTFOLIOS OF HOTELS

Two distinctions should be noted for hotel companies. First, while some of the Low and Medium classified sources of emissions may be significant or exceptionally present at a specific hotel within a portfolio, they may be insignificant at the company-level inventory and excluded or estimated, and indicated as such in the company's disclosure.

Second, hotel companies may also have additional sources of Scope 1 & 2 emissions. In addition, hotel chains and conglomerates owning hotel chains may have additional businesses or joint ventures such as retail product lines, venture capital wings, consulting services provision, financing mechanisms, and other hospitality and entertainment facilities. Some common examples include:

- Corporate offices for company-level employees
- Residences
- Sales offices
- Corporate jets owned by the company for executive use
- Company-owned vehicles for staff use
- Leased space as reception facilities in airports and cruise terminals
- Employee housing directly owned or operated by the company
- Other non-property facilities owned or operated by the company

This methodology is intended to address only the aspects of the company as pertaining to the ownership, operation, or franchising of hotels and management of the company. Additional sources of Scope 1 & 2 emissions should be documented, included and classified in the list of sources using the same approach of relative significance to the overall inventory and ability to gather data.

### 2.1.6 FURTHER RATIONALE ON NOTEWORTHY LOW CLASSIFICATIONS

While Appendix C provides the full list of potential Scope 1, 2, and 3 emissions sources of a hotel, the following merit further clarification:

- **Fugitive Emissions.** These are excluded for being insignificant per industry study<sup>14</sup> and for observation in the Greenhouse Gas Protocol's GHG Emissions Calculator which states: **"It is customary to exclude CFCs, HCFCs, and halons from GHG inventories because they are regulated and are being phased out under the Montreal Protocol."**<sup>15</sup>
- **Stationary combustion of fuels to heat other areas.** Some hotels may use minor space heaters or have separate propane tanks to power grills or fireplaces, among other minor heating sources. Except in special cases which a hotel should evaluate internally, these are insignificant in comparison to the overall energy footprint of the building and are therefore commonly excluded.
- **Mobile combustion of fuel for powering vehicles and other mobile equipment.** This factor is commonly excluded for being insignificant at a portfolio level<sup>16</sup>.

<sup>14</sup> For further details see "Determining Materiality in Carbon Footprinting: What Counts and What Does Not." Cornell Hospitality Report 12.12, September 2012  
<sup>15</sup> For further details see the GHG Protocol's GHG Emissions Calculation Tool  
<sup>16</sup> For further details see "Determining Materiality in Carbon Footprinting: What Counts and What Does Not." Cornell Hospitality Report 12.12, September 2012

- **Stationary combustion of fuels to power a backup generator.** Hotels may have a backup generator for onsite generation of electricity, which is used in emergency situations when needed, and for routine testing requirements under load. While this may be a significant source for a hotel in a year of need for prolonged onsite generation, such as a hurricane knocking out local power grids, the use for testing or minor emergencies is insignificant compared to the energy footprint of the building in a year. Note that this also does not apply to hotels/resorts in remote areas such as Maldives etc, where generators are used as primary sources. This point only applies to “backup” sources.
- **Guest transportation from city of origin to the destination.** Though the transportation of travelers to a destination constitutes the largest footprint of the travel industry value chain, a hotel’s net-zero pathway should allow for excluding this portion of guest transportation for the following reasons:
  - **The hotel’s business model is not driven by choice of geographical distance of its guests.** Hotels may focus efforts on source markets to generate better RevPAR, but the origin city of the guest booking a stay is not controllable by the hotel. Furthermore, the prevalence of hotels arranging transportation for their guests is very low in the industry overall, though it may be common in some locations, segments, or companies that have integrated business models.

- **Multi-city itineraries make this overly cumbersome and intrusive to quantify.** A traveler to Glasgow may originate from Dubai, stop over three nights in London, and then after proceeding to Glasgow for one week to stay at the Holiday Inn Glasgow City Centre Theatreland, go on holiday to Paris for three days before returning to Dubai, book the travel via distinct channels. Identifying and apportioning the appropriate transportation emissions attributed to the Holiday Inn Glasgow City Centre Theatreland is overly cumbersome, and when repeated for every guest over each year, hinders the ability to effectively address it.
- **The transportation emissions are more relevantly addressed by others in the travel industry value chain.** It would seem counterintuitive that a hotel should be accountable for a hotel guest’s transportation emissions from city of origin but the airline, tour operator, OTA, corporate travel buyer, event organizer, or business travelers’ company of employment should not. Conversely, it is unlikely that airlines would be addressing the emissions of the hotel stays of their passengers.
- **Other service businesses do not commonly account for transportation in their Scope 3 accounting.** Restaurants do not quantify the Scope 3 emissions of customer travel from origin or home to the restaurant. Nor do movie theaters, theme parks, or sightseeing tours.



## SECTION 3: HOTEL NET-ZERO PATHWAY 2025 - 2050

### 3.1 PATHWAY APPROACH

Although 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 approach:

- 1 Default Milestone Categories** of significant Scope 1, 2, and 3 emissions that should be quantified and decarbonized, as applicable to the hotel or company.
- 2 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.
- 3 Both quantifiable performance targets and actionable process targets** as part of the plan along the pathway, so that all categories can be addressed immediately in some form via actionable processes even when quantifiable baseline values are deferred, and performance targets can be differentiated based on distinctions of control and influence in ownership vs. operations of the hotel.
- 4 Five Yardstick Years** at five-year intervals through 2040 and finally 2050.
- 5 Specific Milestones** to achieve or commence by each yardstick year, open-ended for process targets and suggested thresholds for quantitative performance.

#### 3.1.1 DEFAULT MILESTONE CATEGORIES

**Hotels should be able to quantify, plan, and progress toward net zero in the following 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.

- 1 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 included, 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<sup>17</sup>. This category also covers carbon offsetting for the building Scope 1 emissions based on yearly limits.
- 2 Energy Efficiency** covers all activities to reduce the Scope 1 & 2 energy consumption of the facility, including investment in efficient design, equipment, technology, and operating procedures.

- 3 Energy Sources** covers 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.
- 4 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 process targets, and may be material to the hotel or the company and increase in priority level, including:
  - a** Fugitive Scope 1 emissions from refrigerants
  - b** Vehicles
  - c** Additional company facilities, business units or other activities.
- 5 Franchised Properties** covers reductions of Scope 1 & 2 emissions of franchised properties that form the Scope 3 boundary of the franchisor, if applicable.
- 6 Waste** covers 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.
- 7 Outsourced Laundry** covers Scope 3 emissions of laundry wash at a separate offsite facility outside the hotel's ownership or operational control.
- 8 Embodied Carbon of Building, Land Use Change, and FF&E** covers 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.
- 9 Purchased Ongoing Consumable Goods (F&B, OS&E)** covers the most significant sources of Scope 3 emissions from the upstream lifecycle emissions of products sourced for ongoing consumption at the hotel.
- 10 Employee Commuting** encompasses Scope 3 emissions of property staff commuting to and from work via transportation not owned or operated directly by the hotel.
- 11 Business Travel** covers the transportation and lodging for purposes of business travel of property-level and company-level staff employed by the organization.
- 12 Transmissions & Distribution Losses** includes emissions from location-based losses from delivery of purchased electricity from source (utility) to the hotel.



**13 Other Significant Scope 3** includes 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:

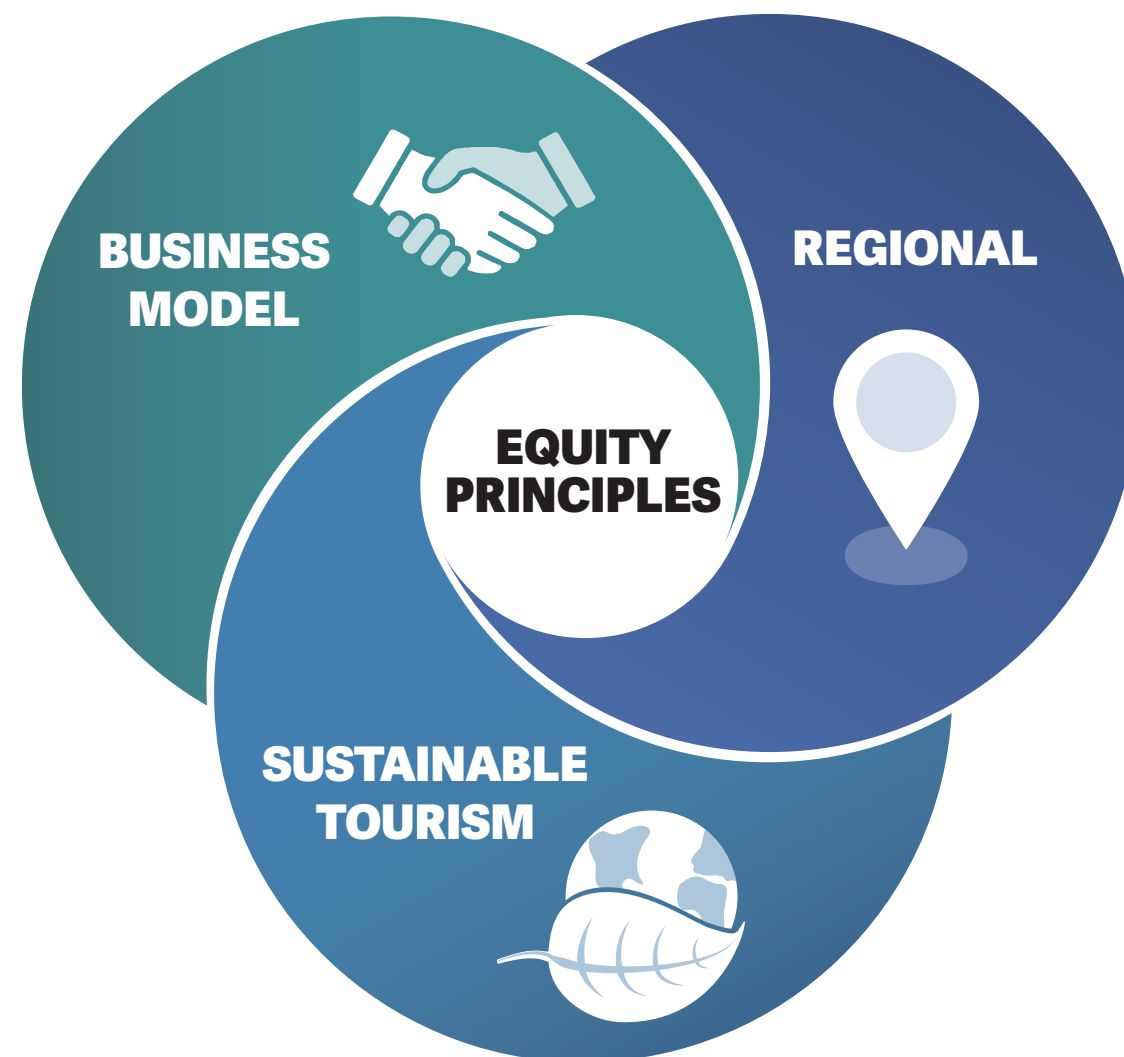
- a Guest transportation and other activities within the destination
- b Transportation of fuel for onsite generation of electricity in remote, private island resorts.

### 3.1.2 EQUITY CONSIDERATIONS IN NET-ZERO PATHWAYS

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. This methodology has identified three equity principles:

- Business model equity principle
- Regional equity principle
- Sustainable tourism equity principle

For more details on the three principles, please refer to Appendix D.



### 3.1.3 PERFORMANCE TARGETS AND PROCESS TARGETS

Performance targets should be set for each of the default categories outlined in Section 3.1.1 to set milestones in each of the yardstick years as outlined in Table 3. Setting of performance targets and corresponding baselines for some of these categories are deferred until 2025 or 2030 yardstick years due to challenges in setting more granular boundaries, and accurately and consistently quantifying the emissions of these sources.

As net zero enhances decarbonization targets to encompass a wider boundary of Scope 3, hotels and companies in turn have less direct control and influence over the decarbonization actions of a hotel's value chain. At the same time they face increased variability in the methods for how carbon emissions will be quantified for these sources. **To address the varying levels of control and influence as well as the complexity of Scope 3 chain emissions, the methodology calls for process-based targets to support credible claims and demonstrate progress over time.** Process targets seek to support decarbonization through actions that can be undertaken immediately, especially where influence and control are low and quantifying emissions is challenging. **In essence, just because a hotel can't fully control or quantify a source, doesn't mean the hotel can't take steps to reduce those emissions.** While these will vary based on category, source of emissions, and degree of control and influence, specific Process Targets should be set for each category.

Examples of process targets include:

- Engagement with suppliers, vendors and service providers to seek better primary data and encourage use of sustainable materials and products
- Conduct or support quantitative studies to determine calculation coefficients and data sources
- Support suppliers in technical capacity and opportunities for decarbonization, encompassing a wide range including training, financing, scalability, innovation, etc.
- Embed criteria and processes into supplier requests for proposals, and eventually contracts that will lead to emissions reductions within the hotel or value chain
- Conduct routine engagement with suppliers and partners (i.e., owners and operators) to review carbon performance and identify opportunities
- Plan for supporting the partner roles among respective entities in net-zero planning and performance (owners/operators/franchisors)
- Embed criteria into operating standards that seek to increase efficiency of operations or equipment, as well as increase use of renewable energy
- Embed criteria and processes into capital budgeting and annual budgeting to require, suggest, or analyze specific areas of energy efficiency, use renewables, and energy sources
- Set managerial performance targets tied to compensation that link to decarbonization activities (but not necessarily specific ESG scores)
- Collaborate with industry bodies to advance specific solutions for collective impact
- Engage with net-zero initiatives in supply chain industries (e.g. textiles) to align pathways
- Incentivize and support staff in alternative and low-carbon transportation options

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Note that some performance targets will relate directly to decarbonization, though the target may be in other metrics. These can be included as performance targets or process targets, as the intent is to build credible claims and demonstrate progress over time. Examples include:

- Waste reduction (including sub-categories of soap, food, etc.)
- Increasing waste diversion
- Increasing percentage of non-animal protein purchases and reducing animal protein purchases
- Committing specific investment amounts in decarbonization
- Achieving certifications that have efficiency and low-carbon or carbon reduction criteria
- Increasing local sourcing

Additional performance and process targets such as engaging with local communities and guests, can be made to support planetary decarbonization, net zero, and climate action. Such elements are outside of the boundary of this methodology which addresses net-zero emissions, but are important and can be found in initiatives such as the Glasgow Declaration.

**3.1.4 YARDSTICK YEARS**

**A suggested, credible pathway is presented for hotels to progress toward net zero.** Each of the five yardstick years is based on an overall scenario as described below, and detailed in Table 3. These yardstick years and milestones may differ, 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 increased energy efficiency and renewable energy procurement, the following rule-of-thumb pathways are suggested as a starting point for evaluating Scope 1 & 2 and related energy reductions from the baseline year through 2030:

- **Scope 1 & 2 emissions intensity** should be reduced from the baseline value 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

The ultimate pathway and associated milestones for interim progress on energy and GHG emissions intensity reductions will be determined by the hotel or company based on its own analysis, and in alignment with goals set by local authorities. Some hotels may already be very efficiently designed or obtaining energy from renewable or low-carbon sources. The reduction targets will also need to be evaluated and adjusted based on the degree of portfolio growth over time, to ensure intensity reductions sufficiently address absolute emissions.

Hotels built after 2020 will need a different plan, as will companies formed recently. In addition, pathways may need to be adapted to follow specific national or local authority decarbonization and reporting needs. The yardstick pathways generally converge at 2030 for the most important milestones regardless of baseline year. However, the baseline year should always be considered, per the approach of the SDA in determining a carbon budget based on a 2010 baseline and 2050 decarbonization, and so as not to incentivize setting the baseline as close to the present as possible. Also, consistently applying a % reduction in direct comparison to the baseline figure ensures that the managerial focus on year-over-year percentages does not diminish returns. Annual % reductions based on a percentage reduction from the prior year can be influenced by various factors, such as fluctuations in business operations, market conditions, or external events. These year-to-year variations can make it challenging to maintain a consistent reduction trajectory, potentially leading to inconsistent progress towards long-term goals. By basing the annual % reduction targets on a fixed base year, the company can better manage and mitigate such uncertainties, ensuring a more stable and reliable emission reduction pathway.

**For example,**

For a 2015 baseline, the % change in emissions from 2029 to 2030 should be:

✓ **2030 emissions = 2029 emissions - (4% X 2015 emissions)**

**NOT**

✗ **2030 emissions = 2029 emissions - (4% x 2029 emissions)**

After 2030, the annual reduction intensity may be able to reduce to a lower pace for intensity as further efficiency measures may prove challenging. The same may apply for GHG emissions, or the pace may strengthen as new forms of renewable energy purchases emerge and economies of scale bring down the cost of reductions. Therefore the starting point rules-of-thumb above are intended for 2030, while milestone figures are presented for evaluation thereafter.





**2025** The next few years will see the most increases in net-zero commitments and planning. 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 (in particular engagement among owners, operators, and franchisors). Credible claims for offsets can be made within allowable thresholds.

**Scope 3:** For the more challenging sources to quantify and influence decarbonization, such as embodied carbon and LCA emissions of purchased goods, 2025 should serve as the year for which most significant sources have been identified in further granularity for quantification and action. Hotels may conduct or support quantitative studies to determine calculation coefficients and data sources. For more information on hotel accounting and allocation of embodied carbon, see Appendix M.



**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 mature markets. In doing so, most of the hotel industry will easily halve their emissions from a 2019 baseline and align with sectoral convergence for emissions of service buildings. Furthermore, 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** This year 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 starting to be addressed.

**Scope 3:** Franchised properties and properties located in developing markets for renewable energy purchase mechanisms to 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 going forward.

**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, and 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 CO<sub>2</sub>e and addressing the mitigation issues resulting from physical impacts of climate change.

**NET ZERO  
METHODOLOGY  
FOR HOTELS**

2<sup>ND</sup> EDITION

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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, and 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 CO<sub>2</sub>e and addressing the mitigation issues resulting from physical impacts of climate change.

▼ **Table 3 Hotel Net-Zero 2025-2050 Performance Milestones**

	CATEGORY	2025	2030	2035	2040	2050	
1	<b>Facility Emissions Intensity</b>	<p><b>At least one of the following thresholds:</b></p> <ol style="list-style-type: none"> <li>25% absolute reduction from baseline or annual linear equivalent<sup>18</sup></li> <li>41% intensity reduction from baseline or annual linear equivalent</li> <li>Emissions intensity of 57 kgCO<sub>2</sub>e/SqM or established industry asset class adapted thresholds</li> </ol> <ul style="list-style-type: none"> <li>Scope 1 offsets can be claimed in net-zero progress calculations up to 12 kgCO<sub>2</sub>e/SqM or established industry asset class adapted thresholds</li> </ul>	<p><b>At least one of the following thresholds:</b></p> <ol style="list-style-type: none"> <li>45%-50%* absolute reduction from baseline or annual linear equivalent</li> <li>72% intensity reduction from baseline or annual linear equivalent</li> <li>Emissions intensity of 45 kgCO<sub>2</sub>e/SqM or established industry asset class adapted thresholds</li> </ol> <ul style="list-style-type: none"> <li>Scope 1 offsets can be claimed in net-zero progress calculations up to 7kgCO<sub>2</sub>e/SqM or established industry asset class adapted thresholds</li> </ul> <p><small>* Range given to adjust the target accordingly due to 2020 anomaly year</small></p>	<p><b>At least one of the following thresholds:</b></p> <ol style="list-style-type: none"> <li>60% absolute reduction from baseline or annual linear equivalent</li> <li>88% intensity reduction from baseline or annual linear equivalent</li> <li>Emissions intensity of 34 kgCO<sub>2</sub>e/SqM or established industry asset class adapted thresholds</li> </ol> <ul style="list-style-type: none"> <li>Scope 1 offsets can be claimed in net-zero progress calculations up to 5kgCO<sub>2</sub>e/SqM or established industry asset class thresholds</li> </ul>	<p><b>At least one of the following thresholds:</b></p> <ol style="list-style-type: none"> <li>73% absolute reduction from baseline or annual linear equivalent</li> <li>95% intensity reduction from baseline or annual linear equivalent</li> <li>Emissions intensity of 23 kgCO<sub>2</sub>e/SqM or established industry asset class adapted thresholds</li> </ol> <ul style="list-style-type: none"> <li>All remaining fuel sources quantified and offset, with Scope 1 offsets being claimed in net-zero progress calculations up to 2 kgCO<sub>2</sub>e/SqM or established industry asset class thresholds</li> </ul>	<ul style="list-style-type: none"> <li>99% reduction from baseline</li> <li>100% renewable electricity for all markets</li> <li>Total energy from renewables exceeds 90%</li> <li>Electrified sources of heating and cooling either in place, confirmed for replacement at end-of-life or renovation, and embedded in any new projects unless unfeasible</li> <li>All remaining emissions sources quantified and offset</li> </ul>	
	2	<b>Energy Efficiency</b>	<ul style="list-style-type: none"> <li>Cumulative reduction of at least 10% from baseline, or among highest performance</li> </ul>	<ul style="list-style-type: none"> <li>Cumulative reduction of at least 20% from baseline, or among highest performance</li> </ul>	<ul style="list-style-type: none"> <li>Cumulative reduction of at least 25% from baseline, or among highest performance</li> </ul>		<ul style="list-style-type: none"> <li>Cumulative reduction of at least 30% from baseline, or among highest performance</li> </ul>
	3	<b>Energy Sources</b>	<ul style="list-style-type: none"> <li>Demonstrate increase in % of total energy from renewables from baseline</li> </ul>	<ul style="list-style-type: none"> <li>100% renewable electricity for mature markets</li> <li>50% renewable electricity for developing markets, including grid mix</li> </ul>	<ul style="list-style-type: none"> <li>100% renewable electricity for mature markets</li> <li>75% renewable electricity for developing markets, including grid mix</li> <li>Achieve increase in % of total energy from renewables from 2030</li> </ul>		<ul style="list-style-type: none"> <li>100% renewable electricity for all markets</li> <li>Achieve an increase in % of total energy from renewables from 2035</li> </ul>
	4	<b>Other Scope 1 &amp; 2 (when separated from above)</b>	<ul style="list-style-type: none"> <li>Demonstrate reduction from baseline</li> </ul>	<ul style="list-style-type: none"> <li>100% renewable electricity for mature markets</li> <li>50% renewable electricity for developing markets, including grid mix</li> <li>Achieve reductions in emissions from 2025 for each source</li> </ul>	<ul style="list-style-type: none"> <li>100% renewable electricity for mature markets</li> <li>75% renewable electricity for developing markets, including grid mix</li> <li>Achieve increase in % of total energy from renewables from 2030</li> <li>Achieve reductions in emissions from 2030 for each source</li> </ul>		<ul style="list-style-type: none"> <li>100% renewable electricity for all markets</li> <li>Achieve an increase in % of total energy from renewables from 2035</li> <li>Achieve reductions in emissions from 2035 for each source</li> <li>All remaining sources quantified and offset</li> </ul>

	CATEGORY	2025	2030	2035	2040	2050
5	<b>Franchised Properties (Franchisors)</b>	<ul style="list-style-type: none"> <li>■ &gt;70% of portfolio reporting actual data</li> <li>■ At least one of the following thresholds for the portfolio with actual data: <ul style="list-style-type: none"> <li>▶ 15% absolute reduction from baseline or annual linear equivalent<sup>19</sup></li> <li>▶ 36% intensity reduction from 2019 baseline or annual linear equivalent</li> <li>▶ Emissions intensity of 50 kgCO<sub>2</sub>e/SqM or established industry asset class adapted thresholds</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ &gt;95% of portfolio reporting actual data</li> <li>■ &gt;40% renewable electricity for mature markets</li> <li>■ &gt;25% renewable electricity for developing markets, including grid mix</li> <li>■ At least one of the following thresholds for the portfolio with actual data: <ul style="list-style-type: none"> <li>▶ 27.5% absolute reduction from baseline or annual linear equivalent</li> <li>▶ 54% intensity reduction from 2019 baseline or annual linear equivalent</li> <li>▶ Emissions intensity of 32.5 kgCO<sub>2</sub>e/SqM or established industry asset class adapted thresholds</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ &gt;95% of portfolio reporting actual data</li> <li>■ &gt;70% renewable electricity for all markets</li> <li>■ At least one of the following thresholds for the portfolio with actual data: <ul style="list-style-type: none"> <li>▶ 49% absolute reduction from baseline or annual linear equivalent</li> <li>▶ 66% intensity reduction from 2019 baseline or annual linear equivalent</li> <li>▶ Emissions intensity of 24 kgCO<sub>2</sub>e/SqM or established industry asset class adapted thresholds</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ &gt;95% of portfolio reporting actual data</li> <li>■ 100% renewable electricity for all markets</li> <li>■ Achieve an increase in % of total energy from renewables from 2035</li> <li>■ At least one of the following thresholds for the portfolio with actual data: <ul style="list-style-type: none"> <li>▶ 70% absolute reduction from baseline or annual linear equivalent</li> <li>▶ 77% intensity reduction from 2019 baseline or annual linear equivalent</li> <li>▶ Emissions intensity of 16 kgCO<sub>2</sub>e/SqM or established industry asset class adapted thresholds</li> <li>▶ All remaining fuel sources quantified and offset</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ &gt;95% of portfolio reporting actual data</li> <li>■ 100% renewable electricity for all markets</li> <li>■ Achieve an increase in % of total energy from renewables from 2035</li> <li>■ All remaining fuel sources quantified and offset</li> </ul>
6	<b>Waste (Operator)</b>	<ul style="list-style-type: none"> <li>■ Accurately measured with actual data, with baseline set</li> </ul>	<ul style="list-style-type: none"> <li>■ Waste reduction in line with established industry benchmarks/goals</li> <li>■ Cumulative waste emissions intensity reduction from baseline exceeds waste intensity reduction, as most intense sources are further reduced and diversion increases</li> </ul>	<ul style="list-style-type: none"> <li>■ Waste reduction in line with established industry benchmarks/goals</li> <li>■ Significant sources of GHG emitting waste are further reduced</li> <li>■ Cumulative waste emissions intensity reduction from 2030 exceeds waste intensity reduction, as most intense sources are further reduced and diversion increases</li> </ul>	<ul style="list-style-type: none"> <li>■ Waste reduction in line with established industry benchmarks/goals</li> <li>■ Cumulative waste emissions intensity reduction from 2035 exceeds waste intensity reduction, as most intense sources are further reduced and diversion increases</li> <li>■ All significant waste sources quantified and offset</li> </ul>	<ul style="list-style-type: none"> <li>■ Waste reduction in line with established industry benchmarks/goals</li> <li>■ Cumulative waste emissions intensity reduction from 2040 exceeds waste intensity reduction, as most intense sources are further reduced and diversion increases</li> <li>■ All significant waste sources quantified and offset</li> </ul>
7	<b>Outsourced Laundry (Operator)</b>	<ul style="list-style-type: none"> <li>■ Emissions are accurately quantified with coefficients and portfolio estimates, with baseline set</li> </ul>	<ul style="list-style-type: none"> <li>■ Suppliers' facilities powered by 100% renewable electricity in mature markets</li> </ul>	<ul style="list-style-type: none"> <li>■ Suppliers' facilities powered by 100% renewable electricity in mature markets</li> <li>■ &gt;50% of supplier facilities powered by 100% electricity for developing markets, including grid mix</li> </ul>	<ul style="list-style-type: none"> <li>■ &gt;95% supplier facilities powered by 100% electricity across all markets</li> <li>■ Remaining emissions offset</li> </ul>	<ul style="list-style-type: none"> <li>■ All supplier facilities powered by 100% electricity</li> <li>■ Remaining emissions offset</li> </ul>

	CATEGORY	2025	2030	2035	2040	2050
8	<b>Building and FF&amp;E Embodied Carbon (Owner)</b>	<ul style="list-style-type: none"> <li>Emissions are estimated for the hotel or portfolio at high level</li> <li>Most significant sources within the category are identified and default boundary set</li> </ul>	<ul style="list-style-type: none"> <li>Emissions are accurately quantified by estimation with default data available for use and accounting methodology in place, with baseline set</li> </ul>	<ul style="list-style-type: none"> <li>Achieve reduction emissions from 2030</li> <li>All new build embodied carbon committed for offsetting over established industry best practice</li> <li>Achieve quantifiable progress in increase in renewable energy use in default boundary</li> <li>Threshold of offsetting of embodied carbon to be achieved, determined by established industry best practice</li> </ul>	<ul style="list-style-type: none"> <li>Achieve reduction in embodied carbon emissions from 2035</li> <li>All significant sources of embodied carbon in buildings and FF&amp;E will be contracted with 100% renewable energy</li> <li>Threshold of offsetting of embodied carbon to be achieved, determined by established industry best practice</li> <li>Remaining embodied carbon from all new builds from 2030-2040 offset</li> </ul>	<ul style="list-style-type: none"> <li>Achieve reduction in embodied carbon emission from 2040</li> <li>Remaining embodied carbon from all new builds from 2040 offset</li> <li>All new builds will be committed for offsetting over established best practice in accounting and life cycle</li> </ul>
9	<b>Purchased Ongoing Consumable Goods</b>	<ul style="list-style-type: none"> <li>Most significant sources of emissions from typical spend identified and default coefficients determined for the default boundary, with further segmentation of the category</li> <li>Data collection and estimation methods in place for quantifying annual emissions of most significant sources, with baseline values determined</li> </ul>	<ul style="list-style-type: none"> <li>F&amp;B emissions reduction in line with established industry benchmarks/goals</li> <li>Data collection and estimation methods in place for quantifying annual emissions of all significant sources within the default boundary, with all remaining baseline values determined</li> <li>15% absolute reduction in emissions for sources with 2025 baseline or equivalent, or established industry thresholds by category</li> </ul>	<ul style="list-style-type: none"> <li>F&amp;B emissions reduction in line with established industry benchmarks/goals</li> <li>28% absolute reduction in emissions for sources with 2025 baseline or equivalent, or established industry thresholds by category</li> <li>15% absolute reduction in emissions for sources with 2030 baseline or equivalent, or established industry thresholds by category</li> </ul>	<ul style="list-style-type: none"> <li>F&amp;B emissions reduction in line with established industry benchmarks/goals</li> <li>40% absolute reduction in emissions for sources with 2025 baseline or equivalent, or established industry thresholds by category</li> <li>28% absolute reduction in emissions for sources with 2030 baseline or equivalent, or established industry thresholds by category</li> </ul>	<ul style="list-style-type: none"> <li>All significant sources of emissions related to materials will use 100% renewable electricity</li> <li>Applicable suppliers will offset remaining emissions</li> <li>Hotel/company will offset additional emissions for suppliers not capable of offsetting</li> </ul>
10	<b>Employee Commuting (Operator)</b>	<ul style="list-style-type: none"> <li>Accurately estimated with default data available for use</li> </ul>	<ul style="list-style-type: none"> <li>Accurately calculated and baseline determined with best practice for accepted calculation methods and coefficients</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate reductions in related emissions from baseline</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate reductions in related emissions from 2035</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate reductions in related emissions from 2040</li> <li>100% of remaining emissions offset</li> </ul>
11	<b>Company Business Travel</b>	<ul style="list-style-type: none"> <li>Accurately measured with actual data and baseline intensities</li> </ul>	<ul style="list-style-type: none"> <li>Company bookings for hotel stays and meeting space usage will be in facilities powered by 100% renewable electricity and have a plan in place for net zero</li> </ul>	<ul style="list-style-type: none"> <li>Company bookings for hotel stays and meeting space usage will be in facilities powered by 100% renewable electricity and meet thresholds for: <ul style="list-style-type: none"> <li>&gt;50% of remaining emissions from hotel stays and venue usage will be offset</li> <li>&gt;50% of transport emissions will be offset by best available contribution to host destination/region</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Company bookings for hotel stays and meeting space usage will be in facilities powered by 100% renewable electricity in line with expected performance thresholds for remaining emissions: <ul style="list-style-type: none"> <li>100% of remaining emissions offset</li> <li>100% of transport emissions will be offset by best available contribution to host destination/region</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Company bookings for hotel stays and meeting space usage will be in facilities powered by 100% renewable electricity in line with expected performance thresholds for remaining emissions: <ul style="list-style-type: none"> <li>100% of remaining emissions offset</li> <li>100% of transport emissions will be offset by best available contribution to host destination/region</li> </ul> </li> </ul>

	CATEGORY	2025	2030	2035	2040	2050
12	<b>Transmission &amp; Distribution Losses</b>	<ul style="list-style-type: none"> <li>Accurately measured with actual data and baseline intensities</li> </ul>	<ul style="list-style-type: none"> <li>Performance reductions in line with milestones for energy sources, energy efficiency, and renewables</li> </ul>	<ul style="list-style-type: none"> <li>Performance reductions in line with milestones for energy sources, energy efficiency, and renewables</li> </ul>	<ul style="list-style-type: none"> <li>Performance reductions in line with milestones for energy sources, energy efficiency, and renewables</li> <li>Remaining emissions offset</li> </ul>	<ul style="list-style-type: none"> <li>Performance reductions in line with milestones for energy sources, energy efficiency, and renewables</li> <li>Remaining emissions offset</li> </ul>
13	<b>Other Significant Scope 3</b>	<ul style="list-style-type: none"> <li>Identified, quantified as best available</li> <li>Decarbonization pathway identified with quantifiable milestones for each yardstick year in line with other categories above, and best practices</li> </ul>	<ul style="list-style-type: none"> <li>All other significant sources should be quantified with a minimum 2030 baseline</li> <li>Achievement in reduction per the quantifiable milestones set</li> </ul>	<ul style="list-style-type: none"> <li>Achievement in reduction per the quantifiable milestones set</li> </ul>	<ul style="list-style-type: none"> <li>Achievement in reduction per the quantifiable milestones set</li> <li>All remaining fuel sources quantified and offset</li> </ul>	<ul style="list-style-type: none"> <li>Achievement in reduction per the quantifiable milestones set</li> <li>All remaining fuel sources quantified and offset</li> </ul>

### ENERGY EFFICIENCY AND DECOUPLING ENERGY USAGE FROM CARBON EMISSIONS

Historically in the hotel industry, the primary focus on environmental performance was reducing energy usage. This was primarily because it carried the most potential for cost reduction and return on investment, as well as typically being the largest expense in a hotel operation after labor. In addition, energy usage is tied directly to the carbon emissions associated with it, and was essentially a proxy for carbon reduction.

Increasing energy efficiency is still the most important approach that hotels will focus on in the next few years in terms of building the business case for decarbonization. Investments in efficiency will pay off, and when looked at holistically will help counter other increased expenses. **However, another implication of decarbonization is the shifting focus from energy usage to the source of energy used.** If the hotel is powered by 100% renewable energy, then the energy intensity performance has value for costs and other aspects, but not necessarily for increases in carbon emissions.

The pathway yardsticks are set to increase the focus on carbon emissions and percentage of renewables over time, with less ambitious milestones for long-term energy efficiency after 2030.

**Similar to carbon efficiency, some hotels may already be highly energy efficient, performing well below established benchmarks in the baseline year. The pathway recognizes this possibility so that hotels already meeting best performance thresholds should then be able to focus on other categories to decarbonize.**



### 3.2 STAYING ON THE NET-ZERO 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 sparse in this area.

This methodology purposefully limits guidance on how to “get back on track” in quantifiable terms because the current net-zero focus in 2023 is on credible planning for commitments and action. Moreover, the carbon target discussion in 2023 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.**

### 3.3 CARBON OFFSETTING APPROACH

Carbon offsetting will play a significant role in the hotel and wider travel industry’s pathway to net zero. While carbon offsetting has its limits and its detracting stakeholders, for some activities where there are no alternatives to fossil fuels, carbon offsetting is the most significant way a carbon footprint can be mitigated until 2030. When done well, carbon offsetting can deliver benefits to people in the form of alternative livelihoods, as well as for biodiversity and across the UN Sustainable Development Goals (SDGs). Furthermore, carbon offsetting will proliferate in voluntary markets, as reflected in the burgeoning number of carbon offsetting approaches to consumer products and services, and in particular for travel.

Carbon offsetting has the potential to play a fundamentally different role in the travel industry than in other sectors if aligned with the pillars of sustainable tourism – environmentally friendly practices, protection of natural and cultural heritage, and bringing social and economic benefits to local people.

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, allowing the travel industry to evolve past the ‘pay to pollute’ view of carbon offsetting.

This methodology therefore proposes a strategic approach to carbon offsetting for hotels, which reflects the realities of both the decarbonization pathways available and the proliferation of offsetting within the wider travel and tourism industry, and which ensures that the offsets applied benefit not only the atmosphere, but also the people and places on which the sector depends, applying the so-called Sustainable Tourism Equity Principle. For full rationale and explanation of the strategy please see Appendix K.



## SECTION 4: REPORTING

### 4.1 REPORTING APPROACH

**GHG emissions and corresponding net zero plan 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.** 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:

- As common practice, hotels report on associated CO<sub>2</sub>, CH<sub>4</sub> (Methane), and N<sub>2</sub>O (Nitrous Oxide) emissions collectively as CO<sub>2</sub>e because those are the ones found in the sources of energy consumed and purchased. As CH<sub>4</sub> and N<sub>2</sub>O are consistently an insignificant source in comparison to CO<sub>2</sub>, 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.
- 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.
- 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.
- 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.
- 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<sub>4</sub> and N<sub>2</sub>O commonly use 100-year values based on IPCC AR6<sup>20</sup>, 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.<sup>21</sup>

- 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. Refer to Appendix G for more details on emission factors.
- 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 is considered to be more clear. 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<sup>22</sup>.
  - All hotels at a minimum 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 of 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 to subtract the purchased renewables. Guidance for an approach to the residual mix is found in the Section 4.4 'Distinctions' below, and further explanation on approaches to Scope 2 emissions calculation can be found in Appendix F.
  - Hotel companies should maintain an Inventory Management Plan (IMP) that describes the process for completing high-quality GHG inventory and institutionalize the process for collecting, calculating, and maintaining GHG data. IMP should document all aspects of GHG calculation including the sources, boundary, tools, and auditing and verification process. Please refer to Appendix H for an IMP template that can be used by companies.

## 4.2 MEASURES AND METRICS

The following should be reported at a minimum and be publicly available in some format, which can be a routine ESG disclosure or report.

- 1 Total Scope 1 Emissions
  - In kgCO<sub>2</sub>e for a hotel
  - In MTCO<sub>2</sub>e for a portfolio
- 2 Total Scope 2 Emissions
  - In kgCO<sub>2</sub>e for a hotel
  - In MTCO<sub>2</sub>e for a portfolio
- 3 Total Scope 3 Emissions by category
  - In kgCO<sub>2</sub>e for a hotel
  - In MTCO<sub>2</sub>e for a portfolio
- 4 Scope 1 & 2 Emissions per square meter in kgCO<sub>2</sub>e
- 5 Total Scope 1, 2 & 3 emissions in MTCO<sub>2</sub>e
- 6 For a hotel property, the Hotel Carbon Measurement Initiative (HCMI) measures for emissions per room night and emissions per square meter per hour of meeting space usage, both in kgCO<sub>2</sub>e
- 7 % of Scope 1 and 2 Energy from renewables
- 8 % of Electric power obtained from renewables
- 9 Energy intensity in kWh per square meter

**In addition, hotels may find it useful to report:**

- Scope 1 & 2 Emissions per occupied room in kgCO<sub>2</sub>e
- Scope 1 & 2 Emissions per square foot / square meter in kgCO<sub>2</sub>e
- Scope 3 Emissions intensity by category and relevant intensity metrics as available
- Scope 1, 2, & 3 Emissions per square meter / square foot in kgCO<sub>2</sub>e
- Further breakdowns of % of energy:
  - % of electricity from renewables, inclusive of grid power generated from renewables
  - % of electricity from renewables, exclusive of grid power generated from renewables
  - % of energy from low-carbon sources such as hydrogen or nuclear power.
  - % of energy obtained from electric power sources (% electrification)

- Energy intensity per occupied room
- Energy intensity per square foot / square meter
- Energy intensity in a different unit of measure (MJ, kBtu, etc.)
- Breakdowns of carbon offsets accounted for:
  - Total Scope 1 & 2 Emissions Offset and Net Scope 1 & 2 Emissions in MTCO<sub>2</sub>e
  - Total Scope 3 Emissions Offset and Net Scope 3 Emissions in MTCO<sub>2</sub>e, percentage of which retired by the hotel/company and % accounted for but retired by another entity
  - Net emissions intensity after allowable offsets in kgCO<sub>2</sub>e/SqM
  - % of allowable Scope 1 & 2 Emissions Offset
  - % of Scope 3 Emissions Offset, percentage of which retired by the hotel/company and % accounted for but retired by another entity
  - % of emissions allocated by source (owner, operator, franchisor, value chain)



### 4.3 DISCLOSURES

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<sup>23</sup> and then thereafter it is suggested to disclose in 2025, 2027, and 2030<sup>24</sup>. Baseline and current progress in each of the default categories for the corresponding year for categories with defined KPIs.

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

**This 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.**

### 4.4 DISTINCTIONS

In order to perform GHG emissions calculation and progress towards net zero, it is important to clarify the distinctions in the process for:

- A single hotel vs. a portfolio of hotels
- Reporting for fair comparison vs. reporting for a company's own progress

#### 4.4.1 DISTINCTIONS BETWEEN A SINGLE HOTEL VS PORTFOLIO OF HOTELS

- A single hotel should evaluate whether additional sources of emissions should be included in the boundary, and to report and set forth a plan for decarbonizing as applicable to the hotel, such as refrigerant leakages, mobile vehicle fuel, and onsite wastewater treatment.
- In general, the larger the size of the portfolio, the less significant the Relatively Insignificant and other sources of Scope 1 & 2 emissions will be, and should enable more estimations or exclusions to focus on the key sources of emissions. This generality may not apply in cases where the portfolio consists of a specific type, such as resorts that use more vehicles and treats wastewater onsite, or integrated resorts.

- A portfolio of hotels may not find it useful to embed other company Scope 1 & 2 emissions into its intensity figures for decarbonization per square meter. In such case it can separate them out in the disclosure and planning per the default categories.
- A portfolio of hotels or a company may have different sub-portfolios of varying asset classes as well as different degrees of financial and/or operational control. For example, a conglomerate hotel chain that acquires a smaller hotel chain of differentiated hotel types and significant regional differences, and maintains its operations separately from the rest of the portfolio in some of the areas concerning decarbonization, could be reported separately as the entity (or subsidiary).
- Currently, the residual mix electric power grid emission factors are not available or consistent globally for calculating market-based emissions. Furthermore, the residual mix is not currently understood by the wider community of small hotel owners and operators, or commonly used. While use of residual mix emission factors tends to incentivize the purchase of renewable energy in the long-term, it remains an enigma for use on a global scale. Portfolios of hotels should assess whether the variance between location-based emission factors and residual mix emission factors available in mature markets (i.e., in the European Union) represents a significant portion of the portfolio's emissions, and whether the volatility in year-over-year emission factors will present challenges to ongoing disclosure to stakeholders. For a regional chain operating in Europe, residual mix emission factors are likely to be most of the portfolio. For a large or small global chain based in North America or Asia, it may be negligible. For a full explanation of the residual mix, market-based emission factors, and renewable energy purchases, see Appendix F.
- While changing a single hotel's baseline figures and assumptions in progress against them would only be needed in the event of a structural change to the facility or its main supply of energy, a portfolio of hotels has a more complex set of changes and data challenges. Similarly, the larger the portfolio and the more diverse in owned/managed/franchised, the larger the set of changes and challenges. For portfolio reporting, hotel companies should follow the methodology as set forth in the WWF Hotel Waste Measurement Methodology Section 3, which outlines a comprehensive guidance for waste measurement that can be adapted for GHG emissions on the following:
  - Including and excluding properties as they enter or exit the portfolio
  - Gap-filling of missing data for portions of a hotel and portfolio
  - Portfolio extrapolation and use of default coefficients

For further information on this methodology, please refer to Appendix L.



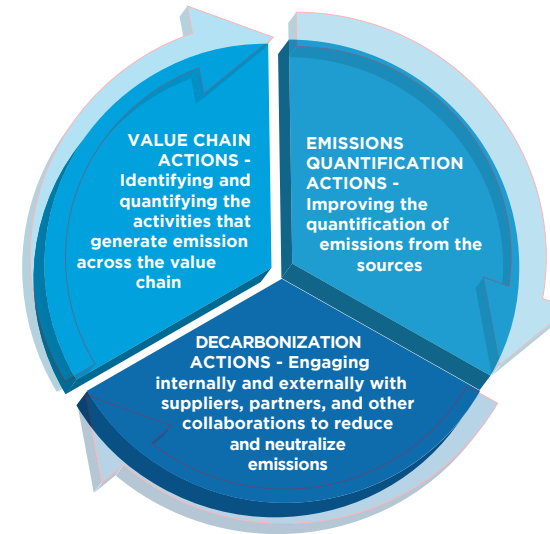
<sup>23</sup> Climate Action Plans as outlined by the Glasgow Declaration for signatories to deliver within 12 months of signing the commitment  
<sup>24</sup> These years have been selected to support the preparation of future methodology versions to address 2030 guidance and yardsticks ahead of them, and so that a company is expected to disclose at least once in between the five year increments.

#### 4.4.2 NET ZERO PLAN

Recently, companies are required by their investors to submit a Net Zero plan outlining their roadmap, actions and activities that they will be undertaking to reach net zero goals. Till now, there are no standard templates for communicating net zero plans, however the following 2 forms of structure and items may be used as reference for developing the net zero plan for hotel companies.

- **Adapting from Hotel Net Zero Methodology Milestone Table**

Some companies (typically REITs) may be comfortable outputting the plan as summary and adapting the hotel net-zero methodology milestone table in the form of their net zero plan. Please see Appendix I as an example.



- **Net Zero Plan based on Three Pillar Approach**

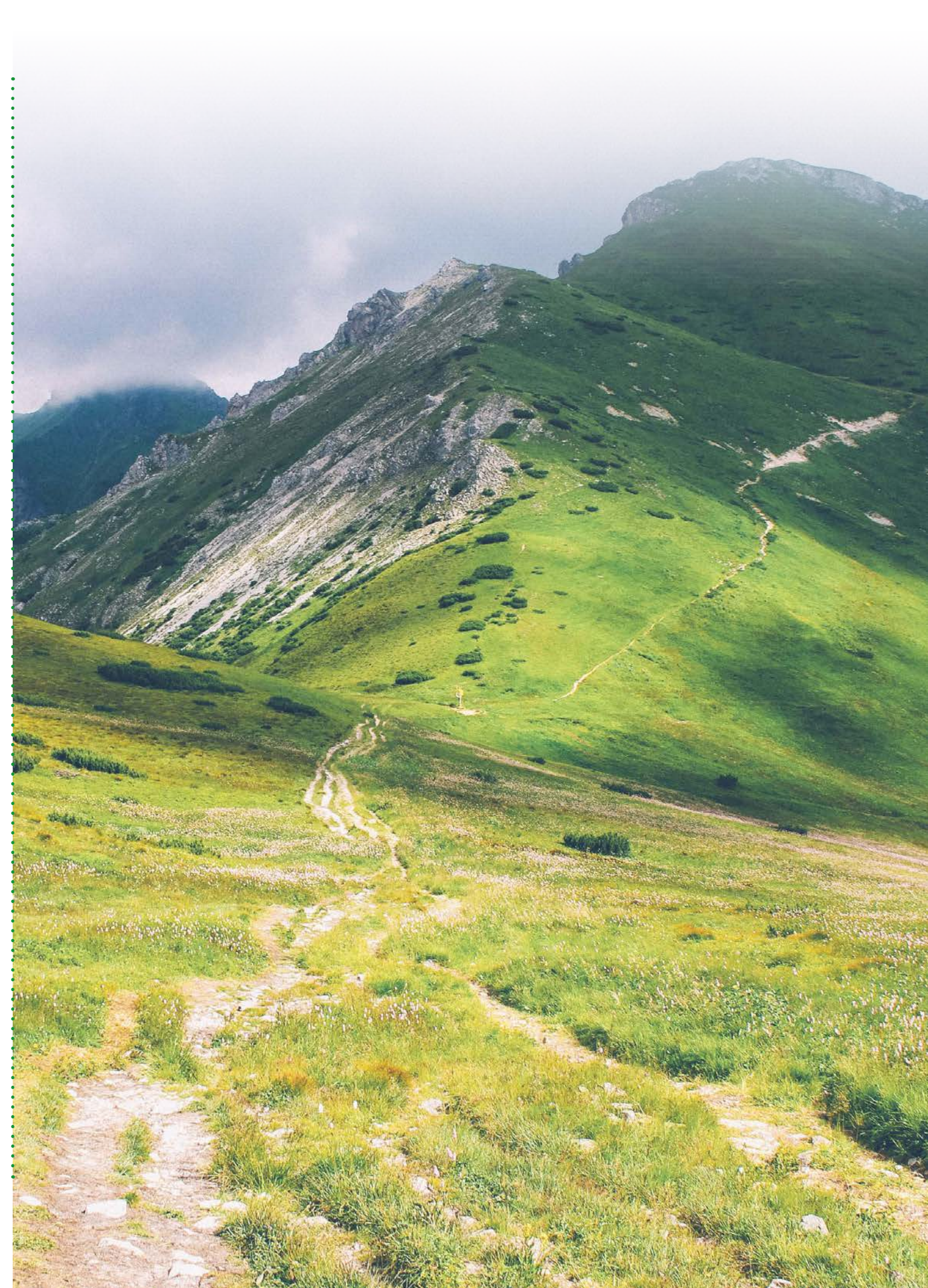
Some companies may choose to communicate their net zero plan in more detail and use the following three pillars to report their roadmap. Please see Appendix I for more details.

#### 4.4.3 DISTINCTIONS BETWEEN REPORTING PROGRESS VS. 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, while others may transition to renewable electricity before 2030
- 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



# SECTION 5: HOTELS AS A PART OF OTHER ENTITIES' VALUE CHAIN EMISSIONS

## NET ZERO METHODOLOGY FOR HOTELS

2<sup>ND</sup> EDITION

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## SECTION 5 HOTELS AS A PART OF OTHER ENTITIES' VALUE CHAIN EMISSIONS

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### 5.1 DEFINING THE ENTITIES INCLUDING HOTELS OR HOTEL STAYS IN THEIR VALUE CHAIN EMISSIONS

For net zero, the carbon footprint of a hotel stay should be understood within its relation 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.

Along with transportation, accommodation is part of Business Travel, one of the 15 defined categories for any company within the **GHG Protocol Supplement: Corporate Value Chain (Scope 3) Accounting and Reporting Standard**. 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. **For all of these entities and more, the hotel or a hotel stay is part of their Scope 3 emissions that will need to be addressed in their own respective net-zero action.** Table 6 outlines these entities and the role they play.

▼ **Table 4** Entities in the value chain of a hotel stay

ENTITY	RELATION AND ROLE
<b>HOTEL OWNER</b>	Owns the physical asset of the hotel. May not own the land upon which the hotel sits. A hotel may have more than one owner. The owner is responsible for approving operator budgets and making investments in the building's upkeep and its equipment, in particular large capital equipment such as chillers and boilers, and other FF&E such as lighting and faucets. This may be a publicly traded entity, SME, private equity fund, sovereign wealth fund, or a number of other structures.
<b>HOTEL OPERATOR</b>	Manages the operations of the hotel and staffs the hotel. May be in a management agreement or lease, whereby some of the physical building responsibility lies with the owner.
<b>HOTEL FRANCHISOR</b>	Provides the brand/flag of the hotel and other support such as distribution, standard operating procedures, design and style guides, training guides, software, and various other aspects to a separate operator. In many cases this includes sustainability software. The franchisor does not staff the hotel or take part in its operation.
<b>HOTEL ASSET MANAGER</b>	Manages the ongoing strategy and budget of the physical hotel property on behalf of the owner, in the case of the owner of the hotel engaging or outsourcing a separate entity to fulfil asset management duties, but that entity is not the operator of the building and does not hold ownership in the asset, but receives a fee for asset management services from the owner.

ENTITY	RELATION AND ROLE
<b>HOTEL COMPANY INVESTOR</b>	Invests capital into the entity that owns, operates, and/or franchises a hotel or a portfolio of hotels.
<b>HOTEL LENDER</b>	Provides a loan to the entity structured to own the hotel property.
<b>HOTEL DEVELOPER</b>	In the case of the hotel owner not undertaking the initial construction and development of the hotel but acquiring it upon turnkey opening, generally 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.
<b>PHYSICAL DESTINATION ENTITY</b>	If applicable, 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. The hotels within the destination will have separate operators and may have separate ownership, e.g. Sentosa (Singapore), Nusa Dua (Bali), Playacar (Mexico), Cap Cana (Dominican Republic), NEOM (Saudi Arabia)
<b>GEOGRAPHIC / POLITICAL DESTINATION ENTITY</b>	The municipal, state/province, designated tourism zone/region, nation, or supranational union or initiative covering several states, nations or economies. This entity may be responsible for policy and codes for hotel building, zoning, accreditation, and operational aspects. The buildings will also be a part of the destination's overall footprint, e.g. Glasgow City Council, Scottish Government, UK Government, Government of Italy, European Union.
<b>GUEST</b>	The person or persons staying at the hotel or, where applicable, attending a meeting or using other amenities or facilities.
<b>CUSTOMER</b>	The entity on behalf of which the guest is staying, if the guest part of an organization, or an entity such as a tour operator.
<b>TRAVEL BUYER</b>	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, e.g. CWT, Amex GBT, Key Travel, Amadeus.
<b>TRAVEL INTERMEDIARY</b>	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, e.g. Expedia, Booking.com, Trip.com, TripAdvisor.

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ENTITY	RELATION AND ROLE
<b>EVENT ORGANIZER</b>	The entity organizing an event which 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. Note this may be further segmented into the organizer of the event and the owner of the event, as well as the entity responsible for the ground handling activities within the destination (a Destination Management Company or DMC)
<b>HOTEL AND TRAVEL MEDIA</b>	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.
<b>TRAVEL CARBON OFFSETTER</b>	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.
<b>SERVICE SUPPLIER</b>	An entity providing a service to a hotel, such as IT support, offsite server, maintenance, consulting, etc.
<b>GOODS SUPPLIER</b>	An entity supplying goods procured by the hotel such as food, soap, etc.
<b>OTHER</b>	Any other entity involved in the value chain that is not specifically categorized within the above.

**5.2 DEFINING THE GHG EMISSIONS BOUNDARIES OF A HOTEL AS SCOPE 3**

Other than the owner and operator, a hotel or hotel stay may fall within the Scope 3 emissions of the entities in the Table 6 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 (pp. 19-20) 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, entities should then proceed to account for their organizational Scope 3 emissions from hotels or hotel stays per the relation in the Table 7 below. Note also that Scope 3 inherently involves double-counting, so the table 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.

**Table 5 Value Chain Boundaries for Hotels and Hotel Stays**

ENTITY	SCOPE 3 BOUNDARY
<b>HOTEL FRANCHISOR</b>	<ul style="list-style-type: none"> <li>Scope 1 and 2 Emissions of the hotel facility and operations</li> </ul>
<b>HOTEL ASSET MANAGER</b>	<ul style="list-style-type: none"> <li>Scope 1 and 2 Emissions of the hotel facility and operations</li> </ul>
<b>HOTEL COMPANY INVESTOR</b>	<ul style="list-style-type: none"> <li>Scope 1 and 2 Emissions of the hotel facility and operations</li> <li>Note that the proportionate embodied carbon of the building in the case of investing in an owner should be accounted for</li> </ul>
<b>HOTEL LENDER</b>	<ul style="list-style-type: none"> <li>Scope 1 and 2 Emissions of the hotel facility and operations</li> <li>Note that the proportionate embodied carbon of the building in the case of investing in an owner should be accounted for</li> </ul>
<b>HOTEL DEVELOPER</b>	<ul style="list-style-type: none"> <li>Until exiting the venture, Scope 1 and 2 Emissions of the hotel facility and operations</li> <li>Embodied carbon emissions of the building are the entity's Scope 1, 2, and 3 depending on the source</li> </ul>
<b>PHYSICAL DESTINATION ENTITY</b>	<ul style="list-style-type: none"> <li>Scope 1 and 2 Emissions of the hotel facility and operations</li> <li>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)</li> <li>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 &amp; 2 or Scope 3, depending on the structure</li> </ul>
<b>GEOGRAPHIC/POLITICAL DESTINATION ENTITY</b>	<ul style="list-style-type: none"> <li>Scope 1 and 2 Emissions of the hotel facility and operations</li> <li>Other value chain emissions of the hotel to be captured separately as related to businesses and activities within the destination</li> </ul>
<b>GUEST</b>	<ul style="list-style-type: none"> <li>Scope 1, 2, and 3 emissions from the hotel stay per the HCMI25 methodology apportioning emissions based on facility type and including outsourced laundry</li> </ul>
<b>CUSTOMER</b>	<ul style="list-style-type: none"> <li>Scope 1, 2, and 3 emissions from the hotel stay and meeting space usage per the HCMI methodology apportioning emissions based on facility type and including outsourced laundry</li> </ul>

ENTITY	SCOPE 3 BOUNDARY
TRAVEL BUYER	<ul style="list-style-type: none"> <li>Scope 1, 2, and 3 emissions from the total amount of hotel stay and meeting space bookings per the HCMI methodology apportioning emissions based on facility type and including outsourced laundry</li> <li>Other offsetting of entity's emissions should contribute to sustainable tourism per Appendix K</li> </ul>
TRAVEL INTERMEDIARY	<ul style="list-style-type: none"> <li>Scope 1, 2, and 3 emissions from the total amount of hotel stay and meeting space bookings per the HCMI methodology apportioning emissions based on facility type and including outsourced laundry</li> <li>Other offsetting of entity's emissions should contribute to sustainable tourism per Appendix K.</li> </ul>
EVENT ORGANIZER	<ul style="list-style-type: none"> <li>Scope 1, 2, and 3 emissions from the total amount of hotel stay and meeting space bookings per the HCMI methodology apportioning emissions based on facility type and including outsourced laundry</li> <li>Other offsetting of entity's emissions should contribute to sustainable tourism per Appendix K.</li> </ul>
HOTEL AND TRAVEL MEDIA	<ul style="list-style-type: none"> <li>Scope 1, 2, and 3 emissions per HCMI methodology resulting from the entity's actual business travel</li> <li>Other offsetting of entity's emissions should contribute to sustainable tourism per Appendix K.</li> </ul>
TRAVEL CARBON OFFSETTER	<ul style="list-style-type: none"> <li>Any carbon offsets transacted and relating to hotel stays or meeting space usage should be quantified using HCMI</li> <li>Offsets transacted in relation to the hotel stay should contribute to sustainable tourism per Appendix K.</li> </ul>
SERVICE SUPPLIER	<ul style="list-style-type: none"> <li>To be determined by the supplier based on the relationship of the services provided to the hotel</li> </ul>
GOODS SUPPLIER	<ul style="list-style-type: none"> <li>To be determined by the supplier based on the relationship of the services provided to the hotel</li> </ul>
OTHER	<ul style="list-style-type: none"> <li>To be determined by the entity based on the relationship to the hotel the services provided to the hotel</li> </ul>

**EXAMPLES**

The examples below show various scenarios of how the myriad relationships can play out. In each case, the entities highlighted in **bold** will have an interest in the carbon emissions of the hotel stay.

**Scenario 1**

Five delegates are staying at the **Radisson RED** in **Glasgow** to attend an international conference at the **Scottish Event Campus (SEC)**. The conference is hosted by the **UK** in partnership with **Italy** and organized by **UNFCCC**. The hotel is owned by local commercial hotel development company **Forrest Hotels**, and managed and operated by **Radisson**.

Delegate 1 is an **independent contractor** working for one of the **event production companies** contracted by the UK government to support the delivery of the event. She booked her hotel stay through the event Booking Partner **MCI** and will invoice the event production company.

Delegate 2 is a high-level representative from a **UN agency**. His hotel stay was booked via the agency's **corporate travel management company**.

Delegate 3 works for a small **NGO** and booked her hotel stay via a mainstream **online travel agency** which she will claim on expenses.

Delegate 4 is a **freelance journalist** covering the event and booked his hotel stay direct with the hotel. He is offsetting his journey and stay using an **online offset provider**.

Delegate 5 is a senior executive from **Radisson**.

**Scenario 2**

A group of ten students from **Germany** are traveling to **Glasgow** for the event. Their group trip was booked on an **online travel website** and included flights from Frankfurt to Edinburgh on Lufthansa and accommodation at a **small privately owned hotel** in central **Edinburgh**. The hotel owner picked them up from the airport in his minibus. During their seven-day stay in Scotland, they travelled three times to Glasgow to **the SEC**, using intercity and local trains, and visited **two major attractions** in Edinburgh, booked through the same website.

**Scenario 3**

A **global travel industry association** is hosting a side event during the international event. The event is a half day meeting of three of its senior executives and ten CEOs **of member companies**. The event is taking place at the Mercure Glasgow – which is owned by **Alternative Income REIT Plc** (a publicly traded company on the London Stock Exchange) and operated by **Jupiter Hotels** under a franchise agreement with **Accor**. The three staff members are staying at the Mercure, as are two of the CEOs. Three of the CEOs work **for global hotel chains** and are staying in their respective company hotels. The other five CEOs are traveling to / from Glasgow on the day.





### 5.3 RESOURCES FOR ESTIMATING AND QUANTIFYING SCOPE 3 EMISSIONS

After exploring the various entities for which hotels and hotel stays involve Scope 3 emissions, the next challenge is understanding how to perform the calculations for these emissions. According to the hierarchy of calculation approaches of the IPCC, as outlined in the GHG Protocol, **activity data is the primary source that should be used for calculating emissions, and facility-specific emission factors are preferable.** As such, value chain entities should use the corresponding activity data of the hotel during the relevant period. For example, a travel buyer would compile the inventory of Scope 3 from hotel stays and meeting space usage according to the HCMI methodology, by obtaining the actual HCMI metrics from each hotel as generated for a 12-month period ending not more than 9 months prior to collection.

While this may be a reasonable exercise to collect for a hotel or instance of hotel stays in an area, **it may prove cumbersome for a travel buyer of hundreds of thousands of room nights across hundreds of hotels and dozens of countries to obtain the actual recent HCMI metrics for each hotel.** Likewise, it will be a significant undertaking for a hotel or hotel chain to provide exact emissions for all room nights for the year to all interested travel buyers. In such cases, per the GHG protocol, sector-specific guidelines and calculation tools, as well as those offered by the GHG Protocol, should be sought.

**The established industry methodology for calculating the carbon emissions of a hotel stay is the HCMI methodology, and the established industry set of default activity data for the carbon emissions of hotels is the Cornell Hotel Sustainability Benchmarking (CHSB) Index which provides HCMI coefficients and other intensity metrics of carbon emissions for hotels by segment in specific cities, countries, regions, and climate zone global regions.**

In addition, Greenview utilizes CHSB index data as a base to output the Greenview Hotel Footprinting Tool, which adds estimations for all countries and segments globally and can be used by the travel industry to quantify estimated carbon footprint of hotel stays and meeting space usage.

The GHG Protocol Quantis Scope 3 Evaluator Tool incorporates the CHSB index as its referential data source for estimating emissions from accommodation in the business travel category, in addition to other government and commercial entities.

**Entities including hotels or hotel stays in their Scope 3 emissions should seek facility-level activity where possible, and supplement with the CHSB index or Greenview Hotel Footprinting Tool to quantify the carbon footprint of hotel stays and meeting space usage as part of their Scope 3 emissions per the boundary suggested above.** For further information on HCMI, CHSB, and the Greenview Hotel Footprinting Tool, see Appendix N. For a complete listing of emission factors and default data sources, see Appendix G.

### 5.4 MULTIPLE COUNTING FOR PURCHASED RENEWABLE ENERGY AND OFFSETS

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 follows:

- **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 & 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 & 2 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 RECs, 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. As outlined in Appendix O, an opportunity for further work is to share best practices and develop innovative solutions for addressing the multiple counting issue.



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The following appendices provide further detailed information, discussion and rationale for various issues addressed in the methodology. Table 8 below provides a summary of each appendix and key information contained within.

▼ **Table 6 List of Appendices**

<b>APPENDIX A: UNDERSTANDING THE CONCEPT OF GHG EMISSIONS SCOPES</b>	<ul style="list-style-type: none"> <li>Overview of Scope 1, 2 and 3 definitions as they relate to hotels</li> <li>List of GHG Protocol Scope 3 value chain categories as related to a hotel</li> </ul>
<b>APPENDIX B: HOTEL BUSINESS MODEL IN CONTEXT OF OWNER VS OPERATOR</b>	<ul style="list-style-type: none"> <li>Hotel ownership structures</li> <li>Additional scenarios of hotel ownership</li> <li>Linking hotel emissions with an entity</li> </ul>
<b>APPENDIX C: SETTING HOTEL NET-ZERO BOUNDARIES WITHIN THE UNIVERSE OF SCOPE 1, 2, AND 3 EMISSIONS</b>	<ul style="list-style-type: none"> <li>Classification approach for prioritizing Scope 1, 2 and 3 emissions of a hotel</li> <li>Categorized list of over 500 GHG emissions sources for a hotel</li> </ul>
<b>APPENDIX D: EQUITY PRINCIPLES</b>	<ul style="list-style-type: none"> <li>Business Model Equity Principle</li> <li>Regional Equity Principle</li> <li>Sustainable Tourism Equity Principle</li> </ul>
<b>APPENDIX E: METHODOLOGY ALIGNMENT WITH OTHER INDUSTRY INITIATIVES AND SBTI VALIDATION PROCESS</b>	<ul style="list-style-type: none"> <li>Detailed analysis of alignment of this methodology with other frameworks (Race to Zero, Glasgow Declaration, SBTi, etc.)</li> <li>Guidance on how to apply this methodology when working with / towards other frameworks, particularly science-based targets</li> <li>The entire step-by-step process for SBTi validation and questions that can be asked by SBTi with their potential answers and approaches</li> </ul>
<b>APPENDIX F: PURCHASED RENEWABLE ENERGY AND ADDRESSING MARKET-BASED EMISSIONS</b>	<ul style="list-style-type: none"> <li>Different ways hotels can embrace renewable energy through on-site generation, PPAs and EACs</li> <li>Availability of purchased renewable energy in different geographies</li> <li>Scope 2 quantification and accounting approaches</li> <li>RE100 criteria, key considerations and details</li> <li>RECs accounting, allocating and claiming</li> </ul>
<b>APPENDIX G: EMISSION FACTORS, COEFFICIENTS, AND DEFAULT DATA FOR QUANTIFICATION OF SCOPE 1,2 AND 3 EMISSIONS</b>	<ul style="list-style-type: none"> <li>List of sources</li> <li>Scope 3 emissions quantification approaches and sources</li> </ul>
<b>APPENDIX H: INVENTORY MANAGEMENT PLAN (IMP)</b>	<ul style="list-style-type: none"> <li>Structure and content of a standard IMP</li> </ul>

<b>APPENDIX I: NET ZERO PLAN</b>	<ul style="list-style-type: none"> <li>Structure and content of net zero plans</li> </ul>
<b>APPENDIX J: THE PURCHASED CHILLED WATER CONUNDRUM</b>	<ul style="list-style-type: none"> <li>Discussion on the challenge of quantifying emissions from purchased chilled water</li> </ul>
<b>APPENDIX K: A NET-ZERO CARBON OFFSETTING STRATEGY FOR THE HOTEL INDUSTRY</b>	<ul style="list-style-type: none"> <li>Background context for offsetting</li> <li>Detailed description and rationale of strategy</li> <li>List of SDG aligned carbon offsetting projects</li> <li>Overview of key carbon standards</li> <li>How to address multiple counting</li> <li>Claiming carbon offsets and considerations for purchasing offsets</li> <li>Brief discussion of carbon insetting</li> </ul>
<b>APPENDIX L: PORTFOLIO EXTRAPOLATION METHODOLOGY</b>	<ul style="list-style-type: none"> <li>Outline approach for extrapolating portfolio level data</li> </ul>
<b>APPENDIX M: UPSTREAM EMISSIONS – EMBODIED CARBON IN HOTEL BUILDINGS, FF&amp;E, AND FOOD &amp; BEVERAGE</b>	<ul style="list-style-type: none"> <li>Detailed information on embodied carbon in buildings including key sources of embodied carbon, how it relates to the building lifecycle, discussion of current approaches to calculating embodied carbon, and key actions to reduce embodied carbon in hotels</li> <li>Detailed discussion of upstream emissions from purchased furnishings, including key sources of emissions, calculation approaches and reduction actions</li> <li>Detailed discussion of upstream emissions from F&amp;B, including key sources of emissions, calculation approaches and reduction actions</li> </ul>
<b>APPENDIX N: INDUSTRY TOOLS TO CALCULATE CARBON FOOTPRINT OF HOTELS</b>	<ul style="list-style-type: none"> <li>Overview of Hotel Carbon Measurement Initiative (HCMI), Cornell Hotel Sustainability Benchmarking Index (CHSB), Greenview Hotel Footprinting Tool</li> <li>Scenarios for using these tools based on different user requirements (hotels, business travel, destinations etc.)</li> <li>Note on HCMI 2.0 version and changes</li> </ul>
<b>APPENDIX O: OPPORTUNITIES FOR FURTHER WORK</b>	<ul style="list-style-type: none"> <li>Potential research projects, collaborative efforts and other opportunities for further work identified by the methodology developed process</li> </ul>
<b>APPENDIX P: FREQUENTLY ASKED QUESTIONS</b>	<ul style="list-style-type: none"> <li>Additional information on key issues which arose during the consultation</li> </ul>
<b>APPENDIX Q: STAKEHOLDER ENGAGEMENT</b>	<ul style="list-style-type: none"> <li>Overview of stakeholder engagement process including entities involved</li> </ul>

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# GLOSSARY OF TERMS

**2-Degree Scenario** – Widely accepted as the limitation to global average temperature growth to prevent significant changes to the planet. One of the goals of the **2015 Paris Agreement** is to limit global average temperature to well below 2°C above pre-industrial levels, and pursue efforts to limit temperature increase to 1.5°C.

**Advisory Group** – Group of experts from hotel companies providing support for the development of the methodology.

**Baseline Value** – Refers to the value against which change is measured. ‘Baseline scenarios’ are based on the assumption that no additional policies/measures will be implemented beyond those that are already in force and/or planned. They are counterfactual constructions that help highlight the level of emissions that would occur without further mitigation effort. Other terms that are often used interchangeably include ‘reference scenario,’ ‘no policy scenario,’ and ‘business as usual (BAU) scenario.’ However, the term ‘BAU’ is no longer preferred due to the difficulties in projecting century-long socioeconomic circumstances. While baseline measurements are a fundamental part of science, emission baselines were mainstreamed by global agreements such as the 1997 Kyoto Protocol which uses emission data from 1990 as the baseline value.

**Carbon Disclosure Project (CDP)** – A global disclosure system for investors, companies, cities, states, and regions to manage their environmental impacts.

**Cornell Hotel Sustainability Benchmarking (CHSB)** – The hotel industry’s largest annual benchmarking of energy, water, and carbon. Open to hotels and hotel companies of all sizes and published in a freely available index every year.

**Double/multiple counting** – Occurs when two or more different companies include the same GHG emissions in their respective inventories.

**Embodied Carbon** – Carbon emissions associated with materials and construction processes throughout the whole lifecycle of a building or infrastructure.

**Emission Factor** – A conversion figure used to convert energy consumption into a unit of carbon.

**Equity Principles:**

- Business Model Equity Principle – Net-zero approach for hotel organizations whose business models are not based on consistent floor area growth; expected to decarbonize quickly.
- Regional Equity Principle – Net-zero approach for hotel organizations whose business models are based on consistent floor area growth.
  - ▶ Mature markets – Hotel organizations in markets that have established renewable energy markets (e.g. EU, US, and Australia) are expected to decarbonize more quickly.
  - ▶ Developing markets – Hotel organizations in markets that have less established renewable energy markets are expected to decarbonize less quickly.

- Sustainable Tourism Equity Principle – Carbon offsets should meet a threshold of sustainable tourism that benefits local communities in terms of tangible economic benefit and protection of natural and cultural heritage.

**Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard** – A standard designed for organizations to inventory and report all of the GHG emissions they produce, categorizing emissions into three scopes and introducing two distinct approaches to consolidate GHG emissions:

- Definition of Scopes:
  - ▶ Scope 1 – Direct GHG emissions that occur from sources owned or controlled by the organization.
  - ▶ Scope 2 – Indirect GHG emissions from generation of purchased electricity consumed by the organization.
  - ▶ Scope 3 – Other indirect GHG emissions that occur as a consequence of the activities of the organization, but occur from sources not owned or controlled by the organization.
- Approaches in Setting Organizational Boundaries:
  - ▶ Equity Share Approach – Company accounts for GHG emissions from operations according to its share of equity in the operation.
  - ▶ Control Approach – Company accounts for 100 percent of the GHG emissions from operations over which it has control, whereby control can be defined in either financial or operational terms.

**Global Sustainable Tourism Council (GSTC)** – Establishes and manages global standards for sustainable travel and tourism.

**Greenview Hotel Footprinting Tool** – Tool to calculate the carbon footprint of a hotel stay or meeting anywhere in the world following the Hotel Carbon Measurement Initiative (HCMI) methodology.

**Hotel Carbon Measurement Initiative (HCMI)** – A free methodology and tool for hotels to calculate the carbon footprint of hotel stays and meetings in their properties.

**Hotel Waste Measurement Methodology (HWMM)** – A common approach for the hotel industry to collect waste data, and measure and report waste.

**Intergovernmental Panel on Climate Change (IPCC)** – The United Nations body for assessing the science related to climate change, releasing regular scientific assessments on climate change, its implications and potential future risks, and adaptation and mitigation options.

**ISO 14064** – An international standard against which greenhouse gas (GHG) emissions reports are voluntarily verified. Part 1 (ISO 14064-1:2018) specifies principles and requirements at the organization level for quantification and reporting of GHG emissions and removals. It includes requirements for the design, development, management, reporting, and verification of an organization’s GHG inventory.

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**Long-term Decarbonization** – Refers to a strategy with a long time horizon towards 2050. Such strategies are needed to achieve the Paris Agreement goal of limiting global average temperature to well below 2°C, and preferably 1.5°C, relative to pre-industrial levels. To do so, there is scientific consensus that carbon emissions have to be reduced by half by 2030 and reach net zero by 2050.

**Net-Zero Carbon** – Refers to a state in which the greenhouse gases going into the atmosphere are balanced by removal out of the atmosphere to mitigate global warming. The IPCC concluded that net-zero carbon has to be achieved by 2050 to limit global warming at 1.5°C. Other similar but different terms refer to the different ways in which emissions sources and sinks are accounted for in context, and help to indicate what is included and excluded in the calculations:

- **Climate Neutral:** An actor’s activities result in **no net effect on the climate system**. Any GHG emissions or other activities with warming effects are fully compensated by GHG reductions or removals, or other activities with cooling effects – irrespective of the time period or the relative magnitude of emissions and removals involved. A near synonym for GHG neutral, but climate neutral also includes non-GHG radiative forcing effects, such as land use changes with albedo effects. Not a valid end-state target, as it does not require “like for like” balancing, but a possible intermediate step.
  - **GHG Neutral:** An actor’s **net contribution to global GHG emissions is zero**. Any GHG emissions attributable to an actor’s activities are fully compensated by GHG reductions or removals exclusively claimed by the actor – irrespective of the time period or the relative magnitude of emissions and removals involved. Not a valid end-state target, as it does not require “like for like” balancing, but a possible intermediate step.
  - **Carbon Neutral:** An actor’s **net contribution to global CO2 emissions is zero**. Any CO2 emissions attributable to an actor’s activities are fully compensated by CO2 reductions or removals exclusively claimed by the actor – irrespective of the time period or the relative magnitude of emissions and removals involved. Not a valid end-state target, as it only refers to carbon, but a possible intermediate step.
  - **Carbon Negative:** An actor’s **carbon removals**, internal and external, **exceed its emissions** and any removals are “like for like.” Must be specified over a declared time period, and whether removals and emissions are cumulative or represent only the time period specified. Not a valid end-state target, as it only refers to carbon, but a possible intermediate step.
  - **Climate Positive / Net Negative:** An actor’s **GHG removals**, internal and external, **exceed its emissions** and any removals are “like for like.” Must be specified over a declared time period, and whether removals and emissions are cumulative or represent only the time period specified. A valid end-state target.
  - **Absolute Zero / Zero Emissions:** **No GHG emissions** are attributable to an actor’s activities across all scopes. Under this definition, no offsets or balancing of residual emissions with removals are used. A valid end-state target.
- **Net-Zero Target** – Refers to target set by countries and organizations to reach net-zero carbon emissions by a selected date.
  - **Net-Zero Pathway** – Refers to the temporal evolution of natural and/or human systems toward a future net-zero state. The trajectory is modeled based on a set of features such as technological advancement and institutional policy changes, depending on the course of action and strategy set by countries and organizations to achieve net-zero carbon emissions by the selected date.

**Paris Agreement** - Legally binding international treaty on climate change to limit global warming to well below 2°C, preferably to 1.5°C, compared to pre-industrial levels and achieve a net-zero world by 2050.

**Pacific Asia Travel Association (PATA)** – An association working to promote the responsible development of travel and tourism in the Asia Pacific region.

**RevPAR** – Refers to revenue per available room, a performance metric in the hotel industry that is calculated by dividing a hotel’s total guestroom revenue by the total number of available rooms in a specific period.

**Rule-of-thumb Pathway** – Suggested pathway from baseline year to 2030 whereby (1) Scope 1 & 2 emissions should be reduced by 3% per year for OG Baselines (<2012), 4% per year for Prior Baselines (2013-2018), and >5% per year for New Baselines, and (2) Energy intensity should be reduced by 2% per year regardless of baseline.

**Sustainability Accounting Standards Board (SASB)** – A sustainability accounting standards designed to help public corporations disclose material, decision-useful information to investors.

**Science Based Targets initiative (SBTi)** – Defines and promotes best practice in emissions reductions through science-based targets which are aligned with what the latest climate science deems necessary to meet the goals of the Paris Agreement – limiting global warming to well below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C.

**Sectoral Decarbonization Approach (SDA)** – An approach that allocates the 2°C carbon budget to different sectors, taking into consideration inherent differences among sectors, such as mitigation potential and how fast each sector can grow relative to economic and population growth.

**Convergence** – Level where all companies within a given sector reduce their emissions intensity to a common value by some future year as dictated by a global emissions pathway.

**Sustainable Hospitality Alliance (The Alliance)** – An alliance of leading hospitality companies taking collective responsibility to address key environmental and social challenges in the industry.

**SWAG** – **Stuff We Always Give Away**, a common phrase in meetings and events to denote giveaways by event organizers and exhibitors

**Tourism Declares Climate Emergency** – A coalition of tourism businesses, organizations and individuals that have declared a climate emergency and are taking purposeful action to reduce their carbon emissions.

**UN Race to Zero Campaign** – A global campaign to rally leadership and support from businesses, cities, regions, investors for a healthy, resilient, zero-carbon recovery that prevents future threats, creates decent jobs, and unlocks inclusive, sustainable growth.

**UN Sustainable Development Goals (SDGs)** – A collection of 17 interlinked global goals designed to be achieved a sustainable future for all across the globe.

**World Travel & Tourism Council (WTTC)** – The representative body of the global Travel & Tourism private sector, with members consisting chief executives of leading travel & tourism companies, destinations, and industry organizations.

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**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.



**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.