



CHAPTER & REGION

CARBON GUIDE

A Guide to Reducing Chapter's and Region's Carbon Footprints

April 2024

Table of Contents

Introduction	3
Purpose	3
How to Use this Guide	3
Section 1 – General Considerations.....	4
Travel	4
Minimize Vendor and Event Throwaway Material	4
Thermostat Setpoints for Interior Activities and Attire	4
Minimize Shipping Materials	4
Holding Meetings	5
Section 2 – Chapter Activities	6
Chapter Meetings	6
Virtual / Hybrid Meetings	6
Distinguished Lecturer Program	6
Venue Selection	6
Board of Governor (BOG) and Committee Meetings.....	7
Events.....	7
Golf Tournaments	8
Fishing Tournaments.....	8
Social Events & Mixers	8
Skeet Shooting	8
Section 3 – Region Activities.....	9
Regional Award for Carbon Footprint Reduction	9
Chapters Regional Conference (CRC).....	9
Venue Selection	9
Group/Public Transportation	10
Activity considerations.....	11
Giveaways	11
Shipping.....	11
Chapter Visit Travel.....	11
Meeting Dates.....	11

Utilize Regional Leaders.....	11
Annual & Winter Conference Activities	12
President-Elect Training (PET) and Regional Planning Meeting (RPM)	12
Incentives	12
Section 4 – Mitigation Measures	13
Supporting ASHRAE.....	13
Carbon Offsets	13
Utilizing of Carbon Offsets	13
Purpose of Offsets.....	13
Calculation Methods	14
Set Emissions Targets.....	14
Recommend Offset Sources.....	14
Budgeting for Carbon Offsets	15
Other Opportunities.....	15

Introduction

Purpose

This document is intended to guide to chapters and regions (chapters/regions) that desire to reduce their carbon footprint. There is not a requirement for chapters/regions to follow this guide. The main purpose is to provide a resource for chapters/regions on how to best reduce their carbon footprint related to their operation of conferences, meetings, and events without compromising event quality, delivery of member benefit, and appeal to prospective members. The pursuit of carbon-reducing measures should be done with the intent of pursuing ASHRAE's vision of providing a healthy and sustainable environment for all. As part of that pursuit, carbon reduction should be done with the member in mind, understanding ASHRAE's unique position. The value of ASHRAE participation and technical content dissemination to members (and others) is a key part in overall carbon reduction of the built environment, and temporary measures should not compromise that participation that will have both short- and long-term benefits towards built environment carbon footprint reduction.

How to Use this Guide

Guidance from this document should be adapted, as appropriate, to local events based on resources available from the organizing chapters/regions. Carbon reduction should not be pursued at the financial risk of chapters/regions, and volunteer time should still be respected if certain activities by volunteers may contribute to carbon footprint reduction. If efforts to completely eliminate a chapter's/region's carbon footprint are not pursued, chapters/regions should consider even partial efforts, as any effort towards carbon footprint reduction matters.

Carbon footprint reduction should be done in accordance with the ASHRAE Code of Ethics. Carbon offsets and activities that reduce carbon should not include or partake in activities that may be illegal or violate local regulations or codes, including building codes, where the event is occurring. Furthermore, carbon footprint reducing activities should not violate ASHRAE standards, whether or not the local authority having jurisdiction enforces the standards, as ASHRAE's local work should remain consistent with the work of the Society.

Carbon footprint reduction should be done without eroding the ASHRAE Diversity Commitment and intention to have events that promote diversity, equity, and inclusion. Carbon footprint reduction measures should be done in a way that does not make ASHRAE regional or chapter events inaccessible to or exclude any demographic.

Note: Throughout this guide, when something applies to both chapters and regions, the term chapters/regions will be used.

Section 1 – General Considerations

There are several carbon reduction considerations that are applicable to chapter and region activities. These items have been included once in this section. Please use this section in conjunction with your specific situation.

Travel

When considering travel, it is important to avoid negatively impacting attendance at conferences, meetings, and events. It is also important to look at travel options, which may have a significant impact on carbon emissions. Flying, driving, carpooling, and using mass transit are all options to think about. If driving, the type of vehicle (and fuel) should also be considered. Where applicable, coordinating airport arrival and departure times for the purpose of ridesharing to a hotel could be implemented. Both chapters and regions could also incentivize travel methods that minimize the negative impact to our environment.

Minimize Vendor and Event Throwaway Material

When organizing chapter/region events, ensure that volunteers and participants maximize use of reusable materials. This may include requesting venues to provide reusable cutlery, plates, glasses, and napkins and having volunteers utilize reusable water bottles, bags, and containers to transport items for events.

For vendor shows, chapter/region hosts should clearly communicate a show policy to strongly encourage waste minimization. Various vendors may see this policy as limiting the effectiveness of their show space. Region and/or chapter hosts should discuss with objecting vendors to find the best path forward for both parties.

Thermostat Setpoints for Interior Activities and Attire

Thermostat setpoints should utilize recommended comfort levels as identified in ASHRAE Standard 55. Attire should be permitted that allows for higher setpoints (in a cooling dominate situation) or lower setpoints (in a heating dominate situation) to be established, as appropriate, especially for casual events. For meetings where more formal attire may be required, meeting chairs and/or organizers should clearly communicate to meeting attendees and participants of expected attire and thermostat setpoints in the spaces utilized to ensure meeting professionalism and comfort.

Minimize Shipping Materials

Chapter/Region hosts should minimize shipping materials by maximizing acquisition of all event end-items locally. If no local options are available, acquire event end-items that are closer to the event

location. Pursuit of local item purchases leads to the event and, if chapter hosted, the local chapter reinvesting in the local economy.

For regional events, if materials are needed from outside of the local geographic area where the event is held, encourage volunteers to bring the items from their local areas to the events.

Holding Meetings

Holding meetings may be the most frequent activity that chapters/regions coordinate and organize. There are several items to consider when holding meetings:

1. Transition to digital documents and paperless meetings whenever possible¹. Maximize use of Basecamp for sharing documents and storing or archiving for historical and reference purposes.
2. Evaluate when a virtual meeting format is appropriate. In considering offering a virtual meeting, ensure that meeting quality is not compromised to solely reduce carbon footprint.
3. If a meal is served, the reduction or elimination of red meat being served, can reduce carbon footprint.
4. Reduction of portion size of meals, where appropriate. This reduces the quantity of food that must be prepared and eliminates the associated carbon with its production, transport and preparation. Consider hosting a meeting at a time outside of meals to provide appetizers or light servings.
5. Reduction or elimination of use of boxed meals or other single use packaging. Encourage use of reusable cutlery and plates.
6. Reduction or elimination of disposable plastic utensils and straws.
7. Encourage attendees to bring their own water bottle and use water fountains and refill stations instead of providing bottled water.
8. Provide the ability for attendees to bring surplus food home in reusable containers.
9. Thermostat setpoints for activities in interiors / attire.
10. Encourage car sharing and the ability to collaborate with other attendees in advance for arrangements to travel to the event.
11. Use public transport as an alternative to individual transportation (cars, ride shares, taxis) when possible. The ability to access public transportation should be a consideration when selecting a venue for meetings.

¹ McQuade, B., Brandt, D., Leung, L., & Conlan, W. *ASHRAE's Carbon Footprint: Measurement and Recommendations for Reduction Implementation of Presidential Goals for SY23-24* Report to the ASHRAE Board of Directors Winter Meeting (January 21, 2024)

Section 2 – Chapter Activities

Section 1 – General Considerations contains several items that are applicable to Chapter Activities. Please refer to Section 1 in conjunction with this section on chapter activities.

Chapter Meetings

Virtual / Hybrid Meetings

Virtual and hybrid meeting guidance is provided by the ASHRAE Communications Committee, which is available on their [website](#).

Distinguished Lecturer Program

The ASHRAE Distinguished Lecturer (DL) program offers the option of having DLs present in-person or virtually. Choosing to have DL present virtually has the benefit of eliminating carbon emissions due to travel, however the Chapter should consider the impact of a virtual DL presentation versus in person. An option to reduce carbon emissions and still have an in-person DL visit is to choose a DL that is located nearby. A listing of DLs by region can be found [here](#). No matter which option is chosen, planning for a DL visit needs to be done in advance with each DL to ensure goals of the DL visit are met. Information about the DL program can be found at www.ashrae.org/dl.

If it is desired to have an in-person DL visit, there are ways to assist with funding the DL CO₂e emissions mitigation measures fund. The ASHRAE Board of Directors approved \$10,000 in Society Year 2024-2025 to mitigate carbon emissions caused by travel of DLs to Chapter activities and CRCs. Chapters/Regions may consider mitigation measures to address DL travel, whether in the form of third-party offsets, donations to the ASHRAE Foundation for funding an endowment supporting the Center of Excellence for Building Decarbonization, or raising RP funding to support decarbonization research. (See Section 4 for additional information on mitigation measures.)

Venue Selection

Selecting a venue for chapter meetings has many factors to consider for the meetings to be successful. From a carbon reduction standpoint, the location of the venue can make an impact on a Chapter's Scope 3 emissions. Factors to consider include the proximity of the location to the majority of members, the proximity to accessing mass transit, access to electric vehicle recharging facilities or the ability for members to carpool. The goal is to lower the Scope 3 emissions per member.

- **Proximity to Members** - This will likely have the biggest impact for chapters. By selecting a venue that is in the middle of the where members are coming from, decreases the average transit distance per member.

- **Access to Mass Transit** - If a venue can be located where a significant number of members can travel via mass transit, this has the ability to take advantage of a lower carbon transportation medium. Some additional factors to consider are not adversely affecting the non-mass transit members so their emission increases are more than the amount saved by mass transit. The same concept applies to the amount of electric vehicles.
- **Electric Vehicle (EV) Recharging Facilities** - If the meeting location has EV recharging, this can help members maximize the time their vehicles are able to run in EV mode, which is most beneficial to plug-in hybrids. There may also be an option to incentivize members to utilize an EV to travel to the meetings if charging is provided for free or reduced cost.
- **Carpooling** - This doesn't tie directly to venue selection, but encouraging carpooling is a way to help reduce the carbon footprint. The time of the meeting may also have an impact. If the meetings are held over lunch, it is more likely that work colleagues can carpool to and from the ASHRAE meeting. There are more logistical challenges for members against carpooling if the meeting is in the evening and everyone is traveling home directly from the meeting.

Finally, the venue's carbon footprint is also a factor. Does the venue have renewable energy? Does the venue purchase carbon free electricity? What are the venues' practices regarding their suppliers? Are they asking their suppliers to reduce their carbon footprint? These are just an example of some questions that may be asked of a venue and could factor into a decision.

Board of Governor (BOG) and Committee Meetings

See "Holding Meetings" in Section 1. In addition, there is guidance for holding virtual / hybrid attendance provided by the ASHRAE Communications Committee, which is available on their [website](#).

Events

If regular chapter meetings are the backbone of chapter operations, it is the special events that add the spice and flavor to the chapter. It is important to not lose focus that the number one goal of the event is to make sure an event is successful. The purpose of this section is to identify some items to consider when planning an event.

Chapters are encouraged to utilize electronic means to promote events and limit the use of printed out flyers or promotion material. Minimize the amount of throw away giveaways from both the chapter and any sponsors. The guidance for chapter meetings (above) also applies to special event location selection.

Chapters hold a wide variety of special events. Below are some of the more frequently held events and some considerations when holding those events:

Golf Tournaments

Consider golf courses that utilize electric golf carts over gas, with special consideration to courses that utilize low or no carbon electricity to recharge the golf carts. This thought process also applies to courses that utilize electric turf maintenance practices. If meals are served at the event, minimize the use of boxed meals that have large amounts of throw away material.

Fishing Tournaments

Consider gasoline consumption with boats. Minimize location of boat ramps to identified fishing areas deemed eligible for fishing under tournament rules. Consider transportation of the boats to boat ramps. Identify boat ramps that are easily accessible from main highways to minimize taking boats to boat ramps. Ensure that proper catch-and-release methods are utilized to minimize impact to the local habitat. Make sure that all trash is collected on boats and dumped at garbage bins in boat ramp areas, including used fishing line and hooks.

Social Events & Mixers

Refer to the Venue Selection section for details on venue selection for social events and mixers. For Brewery Tours, if a tour is scheduled, consider including in a tour an overview of carbon emissions associated with brewing and how the chapter is offsetting those emissions for the event.

Skeet Shooting

There may be a need for offering carbon offsets due to firearms being used. Chapters may want to inquire with the skeet shooting vendor or do research on the types of firearms used and the carbon emissions associated with that activity.

Section 3 – Region Activities

Section 1 General Considerations contains several items that are applicable to Region Activities. Please refer to Section 1 in addition to this section.

Regional Award for Carbon Footprint Reduction

Regions can consider adding a new award to encourage carbon reduction. This award could be presented to either an individual or a Chapter that made significant efforts during the year to reduce their carbon footprint. The award recipient could simply be chosen by the Director and Regional Chair (DRC), or nominations/applications could be submitted, with the award recipient selected based on a scoring rubric. Please keep in mind that the intent is not to reward a reduction in participation at ASHRAE meetings, conferences, or social events. Consider naming the award something unique and relevant and include in the Regional Budget funds to provide a meaningful award, such as a plaque or trophy. When presenting the award, be sure to mention the specific measures the award recipient implemented to achieve the award, in order to provide all attendees of the Chapter's Regional Conference (CRC) with ideas about what they might implement in the coming year.

Chapters Regional Conference (CRC)

Venue Selection

Venue selection should include carbon footprint as a consideration based on how many resources and personnel the venue is allocating to service the event. Many venues may have a sustainability statement that is public or available upon request that includes carbon impact from activities, which the host region and/or chapter should request or research. Keep in mind that many venues may not be prepared to provide answers to carbon footprint impact based on lack of awareness or understanding of translating activities to carbon. If that is the case, offer ASHRAE resources at www.ashrae.org/decarb for venue management to learn more about building carbon footprint and decarbonization.

An important aspect of the venue selection will require gathering information about the venue to learn more about their operations. Some example questions that could be asked about resource and personnel allocation specific for the event may include the following:

- What materials are used for event service and support? Are the materials biodegradable? Are reusable or recycled materials being used? (Material type and sourcing, especially non-reusable plastics, may lead to higher carbon footprint.)
- What types of food are cooked for the event? (Food sourcing and type may lead to higher carbon footprint.)

- How many people are dedicated to the event? (Number of people dedicated to the event may be connected to work commute and facility usage for event preparation, which lead to higher carbon footprint.)
- When is event preparation occurring? (Event preparation during times of peak building load may lead to higher infrastructure stress, which contributes to higher carbon footprint.)
- How much carbon-based fuel (e.g., natural gas, diesel, etc.) is directly being used by the venue for event preparation and servicing? (Higher site fuel use may lead to higher carbon footprint, depending on source carbon usage of electricity distributed by the local electric utility.)

Hotel selection, especially when overnight accommodation is needed, should include carbon footprint considerations. Many hotels, especially if part of a larger hotel group, may have a sustainability statement that is public or available upon request that includes carbon impact from activities, which the host region and/or chapter should request or research. Some hotels, especially locally run hotels, may not be prepared to provide answers to carbon footprint impact based on lack of awareness or understanding of translating activities to carbon. If that is the case, offer ASHRAE resources at www.ashrae.org/decarb for hotel management to learn more about building carbon footprint and decarbonization. The host chapter or region may consider providing free services to the hotel to help them mitigate their carbon footprint.

Some specific questions to consider asking the hotel may include the following:

- Do hotel guests have the option to reduce housekeeping service frequency? (This may lead to reduced carbon and water footprint.)
- When was the last renovation of the hotel? How updated is the lighting and plumbing in hallways and rooms? (More current hotels may have more efficient lighting, plumbing, and water heating systems, which may lead to reduced carbon and water footprint.)
- If the hotel has a restaurant or bar attached to the establishment, ask questions noted previously but in terms of servicing hotel guests in lieu of specific events.

Group/Public Transportation

Consider the availability of public transportation in urban areas and rideshares in any geographic region. Note that certain jurisdictions may not permit certain rideshares from conducting business in that geographic area. Safety of public transportation should be considered when publicizing public transportation options. Chapters should consider offering rideshares, especially to visiting distinguished guest in the absence of commercially offered rideshares.

Activity considerations

Consider activities that are close to hotel. Maximize use of walking to activities around the hotel, and if activities cannot be held at the hotel maximize the use of carpools, public transportation options or other more sustainable options.

Giveaways

If there is a desire to have a “giveaway” item, offer digital alternatives where possible, feasible, and acceptable. Gift cards are a great way to offer a giveaway that meets most people’s needs, especially to shopping websites with a wide variety of product options. If a physical gift is desired, have a sustainable option. Examples would be something to plant in the ground, a reusable water cup, etc. Some other alternatives include offering extra drink tickets, free meals, etc, for individuals that utilize public transportation to get to and from the CRC.

Shipping

Look to minimize the use of shipping materials. The first step is to utilize digital documents, QR codes, and information sharing through Basecamp, e-mails, calendar invitations, and websites to the greatest extent possible. This includes considering having digital chapter historical displays and digital chapter banner displays. If something must be shipped, ship it to the venue and not to the individual's home.

Chapter Visit Travel

Meeting Dates

Consider modifying meeting dates to minimize travel impacts. Strategic scheduling of chapter visits may minimize the carbon footprint of traveling to chapters, depending on the type of transportation used and availability of regional officers.

Utilize Regional Leaders

Regional leadership should maximize the locations of regional leaders to minimize the carbon footprint of travel. This may offer unique leadership and visit opportunities for Regional Vice Chairs (RVCs) and other regional officers to represent the Director and Regional Chair (DRC) and Regional Members Council Representative (RMCR) when making chapter visits. This should be balanced with providing the opportunity to develop the next level of leaders in the region by understanding the issues for all the chapters in their region and not just the ones that are geographically close.

Many Regional leaders have technical expertise and may offer DL-equivalent quality of technical presentations to chapters while providing regional representation at a chapter meeting. This can save on having both a speaker and a regional representative a chapter, minimizing carbon footprint from transportation.

Annual & Winter Conference Activities

Minimizing the impact of travel to attend the Annual and Winter Conference is addressed in Section 1 – General Considerations.

The Annual and Winter Conferences provide the ability for regions to get together at a Regional Dinner. The location of the Regional Dinner can impact carbon footprint. To reduce this impact, ensure that Regional Dinner Location is centrally located near hotels where Annual and Winter Conference participants are staying to minimize transportation. Ideally select a location that permits walking to the location.

President-Elect Training (PET) and Regional Planning Meeting (RPM)

See Section 1 – General Considerations above, specifically the section on Holding Meetings.

Additional items specific to PET and RPM meetings include:

- Consider holding President Elect Training and the Regional Planning Meeting as one large meeting to reduce travel and carbon footprint.
- Consider a location for the meeting near the airport, or near a public transportation station. The meeting location could also consider utilizing the office of someone with the local chapter instead of hotel, if this option is being pursued, transportation between the meeting location and the hotel of choice should be considered.
- Offer a hybrid option to attend the meeting, if needed.
- Conduct the meeting without the use of any handouts, keep everything digital.

Incentives

Incentives can be used to help encourage following the carbon reductions here are some examples:

- Regional budget modifications (e.g. not reimbursing for ground transportation to encourage ride sharing.)
- Utilize bonuses (or gifts, like extra drink tickets) for using public transportation/zero carbon form of transportation.

Section 4 – Mitigation Measures

There are several ways that chapters/regions can mitigate their carbon impact. Some of the methods are listed below.

Supporting ASHRAE

ASHRAE is undertaking many initiatives to help minimize the impact of the built environment on the environment. Consider having the chapter/region mitigate carbon by supporting ASHRAE's efforts and research dedicated to decarbonization. Ideas of areas to support includes supporting the Center of Excellence for Building Decarbonization, ASHRAE research supporting decarbonization, developing and maintaining ASHRAE professional development courses on decarbonization, and supporting people's ability to register and attend ASHRAE professional development courses on decarbonization. These donations could be made directly or possibly an endowment could be set up with the ASHRAE Foundation. Contact [Kirstin Pilot](#), Staff Director of Development to discuss this option.

Carbon Offsets

Utilizing of Carbon Offsets

ASHRAE is an international engineering society with chapters/regions in over 130 countries in the world. It is neither possible nor practical to eliminate all emissions and continue to effectively execute our mission and vision. In fact, a convincing argument could be made that the net reduction in global building emissions that result from the research, standards, guidelines, education, and other publications developed by ASHRAE in a given year far outweighs its total carbon emissions required to create those products and services in that year. Unfortunately, this impact is very difficult to measure. For that reason, a chapter/region may desire, at least in the short-term, for ASHRAE to purchase carbon offsets to achieve a net-zero carbon outcome.²

Purpose of Offsets

The intent of carbon offsets is to fund an action that will absorb carbon emitted for whatever specified reason or activity. Examples of carbon offsets include a third-party organization planting trees, helping kelp fields expand, or creating and expanding natural carbon sinks.

² McQuade, B., Brandt, D., Leung, L., & Conlan, W. *ASHRAE's Carbon Footprint: Measurement and Recommendations for Reduction Implementation of Presidential Goals for SY23-24* Report to the ASHRAE Board of Directors Winter Meeting (January 21, 2024)

Calculation Methods³

In order to mitigate a chapter/region's carbon footprint, the first step is to understand the magnitude of its carbon footprint. Understanding a carbon footprint requires the calculation of Scope 1, Scope 2, and Scope 3 emissions. Due to most chapters/regions not having a physical office, the vast majority of the carbon footprint will be Scope 3 activities.

As of the writing of this guide, ASHRAE does not have an official calculation methodology that is endorsed for calculating emissions. There are several different calculation methods from GHG Protocol for business travel located [here](#). In addition, GHG Protocol has additional resources that can be found on their website: [Calculation Tools and Guidance](#).

Set Emissions Targets

After the chapter's/region's carbon footprint is calculated, a decision must be made on what to set for a carbon emission reduction goal. There is no requirement on how this goal must be set, but some options include offsetting a percentage of all emissions, up to offsetting 100% of emissions or offsetting a certain segment of a chapter's/region's carbon emissions. There is no right or wrong answer, and the chapter/region leadership will need to determine how much can be accomplished through the mitigation measures in this guide or through the purchase of offsets listed below.

Recommend Offset Sources

As of the writing of this guide, ASHRAE does not have an official source that chapters/regions are required to utilize if they desire to purchase carbon offsets. However, there are a number of sources that have been utilized by ASHRAE and recommended by the American Institute of Architects (AIA). Links to those sources are below and are being provided to assist chapters/regions in finding a source. Chapters/Regions are encouraged to do their own due diligence and are free to choose the carbon offset source that makes the most sense for the chapters/regions.

Sources utilized by ASHRAE to offset Society Executive Committee Scope 3 travel emissions:

- [Sustainable Travel](#)
- Travel Carbon Footprint [Calculator](#)
- [Carbon Footprint Tracking Template](#) for download

³ Farsan, A., Chang, A., Kerkhof, A., Cserna, B., Yan, C., Villasana, F., & Labutong, N. of the Science Based Targets Initiative, Navigant and the Gold Standard, *Value Change in the Value Chain: Best Practices in Scope 3 Greenhouse Gas Management* (November 2018)

Sources Recommended by AIA

- [Cloverly](#)
- [bef](#)
- [Terrapass](#)
 - a. [Green-E Certified climate sellers](#)

Budgeting for Carbon Offsets

Create a line item in your Regional budget for carbon offsets for regional events, such as the CRC, Region Planning Meeting, LeaDRs program, Chapter Visits, Allocated Visits, etc.

Offer the ability for members to voluntarily purchase credits as part of their registration for a meeting, event, or conference that would offset their travel emissions to and from the meeting.

Other Opportunities

ASHRAE Development Committee has numerous avenues and opportunities to provide Regions, Chapters, and other donors with large donations to support decarbonization efforts. Contact the ASHRAE [Staff Director of Development](#) for details.