GBTA Convention 2023 Event Footprint

GBTA

This report was proudly prepared by Thrust Carbon,
a multi award winning green technology firm, focused on
a world where our actions don't have to cost the Earth.

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Event footprint

The carbon footprint of GBTA Convention 2023 is 4,470.9 tonnes of CO2e

This is equivalent to...

- The carbon capture by 135 blue whales
- Producing 1.88 million bars of dark chocolate
- The construction emissions of 140 new homes
- The carbon captured in a forest of 2,951 mature oak trees
- Driving a small car 40.6 million kilometres. You could also drive to the moon 106 times

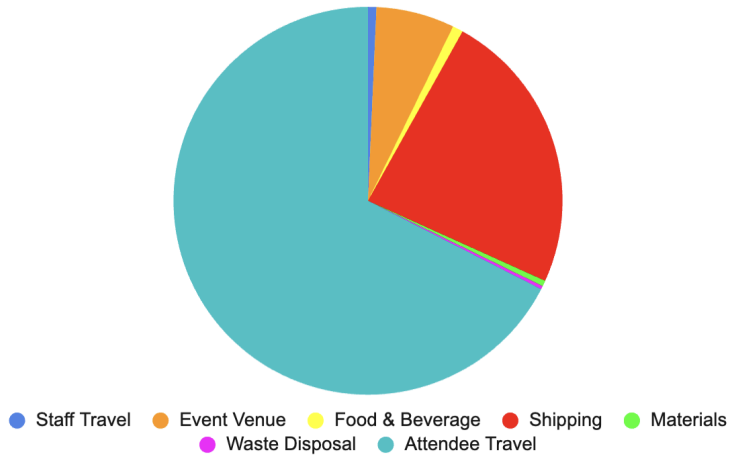
This is a footprint of 0.89 tonnes of CO2e per attendee

Attendee Travel Emissions

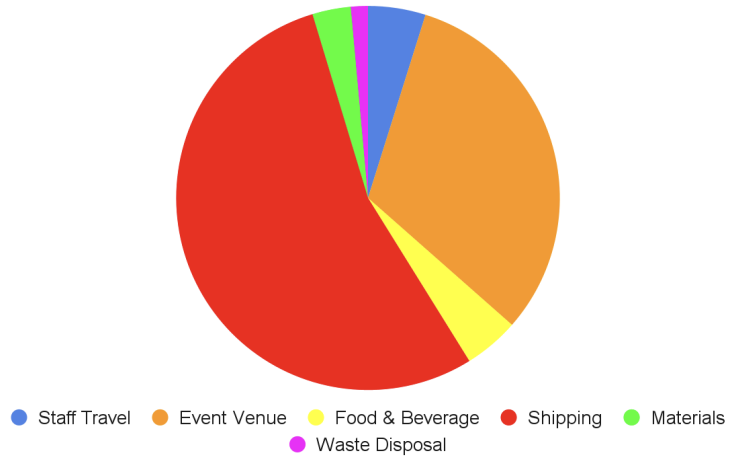
Although not within GBTA control, a significant data collection exercise and complex calculation were executed to understand the impact of attendee travel.

This accounted for 64.3% of total emissions.

Emissions - Including Attendee Travel (4470.863 tCO2e)



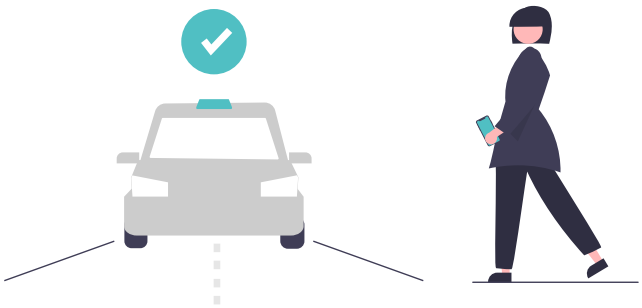
Emissions - Excluding Attendee Travel (1597.393 tCO2e)



Carbon Neutrality

GBTA has offset a total of **1,598 tCO2e**, equivalent to the emissions from staff travel, venue usage, food & beverage, shipping, material use and waste (1384.495 tCO2e), plus a 5% uncertainty buffer (212.898 tCO2e).

Green Wins (1/2)



GBTA provided a free shuttle service to the convention centre, *saving 142 kgCO2e for every 100 attendees who used this instead of a taxi*

Staff were encouraged to reuse their water bottles from GBTA 2022, meaning new bottles were only brought if needed, *saving a total of 36.6kgCO2e.*

GBTA gave exhibitors the option to donate their furniture at the end of the convention *saving 35kgCO2e per 1000lbs of furniture donated* compared to if it was sent to landfill.

Green Wins (2/2)

The majority of meals served at GBTA were vegetarian or contained white meat. *This saved 30.86tCO2e compared to if all meals served had contained beef.*

Detailed footprint (1/2)

Staff Travel

Air travel	25.7/t CO2e
Local commutes	0.148/t CO2e
Conference transport - shuttle	0.0117/t CO2e
Taxi	0.00446/t CO2e
Hotel stays	3.931/t CO2e
	29.796/t CO2e

Attendee Travel

Air travel	2472.500/t CO2e
Car travel	67.167/t CO2e
Public Transport	3.592/t CO2e
Conference transport - shuttle	0.978/t CO2e
Taxi	0.331/t CO2e
Hotel stays	328.902/t CO2e
	2873.470/t CO2e

Event Venue

Electricity usage	271.890/t CO2e
Gas usage	4.808/t CO2e
Water usage	0.208/t CO2e
	276.906/t CO2e

Food & Beverage

Event Food	33.363/t CO2e
Event Beverages	4.230/t CO2e
	37.594/t CO2e

Detailed footprint (2/2)

Shipping	
Shipping	1008.171/t CO2e
	1008.171/t CO2e

Materials	
Graphics & Signage	16.154/t CO2e
Awards	0.120/t CO2e
Electronics	0.418/t CO2e
Lanyards	0.273/t CO2e
Water bottles	0.305/t CO2e
Staff Clothings	3.028/t CO2e
Name Badges	0.0263/t CO2e
Office Supplies (plastic)	0.203/t CO2e
	20.528/t CO2e

Waste Disposal	
General trash	9.691/t CO2e
Materials recycling	1.041/t CO2e
F&B Composting	0.770/t CO2e
	11.501/t CO2e

Uncertainty buffer (5%)	212.898/t CO2e
Total	**4,470.863/t CO2e**

Methodology (1/3)

Staff Travel

GBTA provided Thrust Carbon with an itinerary of staff travel, including their work address city, where they were traveling from the convention, primary mode of transportation, and whether they planned to return to the same destination. Emissions from flights were calculated using the Thrust Calculator, which combines established flight emission methodologies (such as ICAO and DEFRA) with innovative datasets to determine the most suitable carbon value for each specific journey based on available input data.

Staff were assumed to be flying from the airport nearest to their work city or stated starting destination with the highest footfall. For those traveling by car, Google Maps was employed to estimate the average journey distance, followed by the application of the DEFRA emission factor for an average car. In the case of local commuting staff and contractors, a daily average car emissions figure was applied for each day of the convention.

To compute emissions from local shuttles, an emission factor from WinACC (Winchester Action on Climate Change), based on DEFRA guidelines, was applied to an estimation of the total shuttle bus mileage provided by GBTA. Emissions from taxis were determined by assuming that 50% of the staff who flew to the conference would take a taxi from the airport to the venue. The relevant DEFRA emission factor was then applied to this distance.

Emissions generated by hotels were calculated by multiplying the number of room nights by the appropriate nightly emissions factor for Dallas, sourced from the Cornell Hotel Sustainability Index.

Methodology (2/3)

Attendee Travel

GBTA provided Thrust Carbon with an itinerary of attendee travel including their work address city, where they were traveling to the convention from, their primary mode of transport and if they planned on returning to the same destination. Emissions of flights were by the Thrust Calculator, which combines existing flight emission methodologies (such as ICAO and DEFRA) with novel datasets to retrieve the most appropriate carbon value for each given journey depending on the exact input data available. Attendees were assumed to fly from the airport located in their stated start destination with the highest footfall. For those traveling by car, GoogleMaps was used to estimate an average journey distance then the DEFRA emission factor for an average car was applied. To calculate local shuttle emissions, an emission factor from WinACC (Winchester Action on Climate Change), based on DEFRA, was applied to an estimate of the total shuttle bus mileage provided by GBTA. To calculate emissions from taxis, 50% of the staff that flew to the conference were assumed to get a taxi from the airport to the venue. The relevant DEFRA emission factor was applied to this distance.

Hotel emissions were calculated by applying the number of room nights to the relevant nightly emissions factor for Dallas from the Cornell Hotel Sustainability Index.

Event Venue

Electricity, gas and water usage figures for GBTA 2022 were scaled to the number of attendees in 2023. The specific electricity emission factor for Texas was used.

Food & Beverage

All food and beverage portions ordered for GBTA Convention 2023 were counted and analysed in detail. Emissions were then calculated using methodology and research by the International Olympic Committee, who have conducted substantial research into the average carbon emissions of meals and beverages of various types. Where a particular food is not specified within the IOC dataset, we applied a 'nearest' food type or used multipliers from other sources.

Methodology (3/3)

Shipping

The total shipping weight for materials for GBTA Convention 2022 provided by Freeman was used and scaled based on the number of attendees in 2023. Shipping distances were applied based on data provided by Freeman.

Materials

GBTA provided information on purchased materials in the form of order forms or shipping information. The weights of these items were estimated or found on the shipping form and the relevant material DEFRA emission factor was applied. Weights of graphics and signage were provided by Freeman. Emissions were only calculated for the purchased goods information that GBTA provided, therefore we cannot guarantee that all purchased goods were captured. The emissions of lanyards were scaled from the 2022 event as 2023 data was unavailable.

Waste Disposal

Waste emissions were calculated based on 2022 event waste values which were scaled based on the number of attendees in 2023. US EPA emissions factors were applied.

Uncertainty Buffer

While every effort is taken, it is not possible to know every single emission. We therefore add a reasonable buffer (5%), to capture unknown emissions.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