Promotional Products Association International (PPAI)

2023 Greenhouse Gas Assessment

On behalf of Climate Impact Partners

3040278-D1(R01)

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CLIMATE IMPACT PARTNERS

nature positive
an RSK company

NATURE POSITIVE GENERAL NOTES

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1.1 CarbonNeutral® Event

Table 1 displays the CarbonNeutral® certification scope and emissions to be offset.

Table 1: CarbonNeutral® Event certification summary (market-based)

Organisation:	**Promotional Products Association International (PPAI)**		
CarbonNeutral® certification:	**CarbonNeutral® Event**		
Reporting period:	**Various events in 2023**		
Consolidation approach:	**Operational control**		
Emissions source category	**Required or recommended**	**Included?**	**tCO_2e**
All direct emissions from on-site sources used to deliver the activity	Required	✓	0.8
Emissions from the consumption of purchased electricity (including transmission and distribution) and/or steam used in the delivery of the activity	Required	✓	0.6
Travel of employees/ contractors – by air, public transport, rented/leased vehicle and taxi – involved in the delivery of the activity	Required	✓	26.8
Travel of individuals to and from the activity – by air, public transport, rented/leased vehicle and taxi, and hotel accommodation	Recommended	✓	201.7
Waste disposal	Required	✓	0.8
Overall compliance			**230.8**
Total for offset (tCO2e)			**231**

Notes:

1. '✓' denotes that the reporting organisation has opted to assess their emissions for that category. 'X' denotes that the reporting organisation has opted out of assessing emissions for that source category.
2. The market-based approach for calculating electricity emissions was equivalent to the location-based approach for calculating electricity emissions. This is consistent throughout the report.
3. This table illustrates the results of the GHG assessment for all of the individual events considered – Women's Leadership Conference, North American Leadership Conference, Product Responsibility Summit, Legislative Education and Action Day. Please note, it was discussed that the Legislative Education and Action Day (LEAD) was not considered for this assessment as no data was collected as a result of no climate neutral claims being made for this event.

2 CONTEXT

2.1 Why measure greenhouse gas emissions?

Greenhouse gas (GHG) emissions assessments quantify the total GHGs produced directly and indirectly from a business' or organisation's activities. GHG assessments may also be conducted for products or services. Colloquially known as a "carbon footprint", a GHG assessment is an essential tool in the process of monitoring and reducing an organisation's climate change impact as it allows reduction targets to be set and action plans formulated.

GHG assessment results can also allow organisations to be transparent about their climate change impacts through reporting of GHG emissions to customers, shareholders, employees, and other stakeholders. Regular assessments allow clients to track their progress in achieving reductions over time and provide evidence to support green claims in external marketing initiatives such as product labelling or Corporate Social Responsibility (CSR) reporting.

2.2 The Kyoto Protocol GHGs

GHG assessments quantify the Kyoto Protocol greenhouse gases, as applicable, and are measured in terms of tonnes carbon dioxide (CO_2) equivalence, or tCO_2e, where equivalence means having the same warming effect ('global warming potential', or GWP) as CO_2, typically measured over 100 years (see Section 2.3).

The six original Kyoto Protocol gas groups are CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF_6) and perfluorocarbons (PFCs); nitrogen trifluoride (NF_3), a chemical released in certain high-tech industries, was added in 2013. The global warming potential (GWP) of each is presented in Table 2.

Table 2: Kyoto Protocol GHGs and their global warming potential (GWP)

Greenhouse gas/group	Chemical formula	GWP (CO_2e)
Carbon dioxide	CO_2	1
Methane	CH_4	28
Nitrous oxide	N_2O	265
Hydrofluorocarbons	HFCs	Depends on specific gas
Sulphur hexafluoride	SF_6	23,500
Perfluorocarbons	PFCs	Depends on specific gas
Nitrogen Trifluoride	NF_3	16,100

Notes:

The global warming potentials are aligned with AR5 as per DESNZ methodology. Hotel stays, bioenergy, WTT bioenergy and material are still based on a AR4 basis.

2.3 Methane's GWP

Methane (CH_4) is the most abundant GHG after CO_2. It has a higher heat-trapping potential than CO_2 but remains in the atmosphere for a shorter period (typically ~12 years). This means that its GWP depends on the reporting timeframe and can lead to ambiguity. When reporting their GHG emissions, a reporting organisation can choose to use either the 20- or 100-year timeframe multiplier for methane; however, use of the 100-year timeframe – as stipulated by the Greenhouse Gas Protocol Corporate Standard – can underestimate the short-term warming potential considerably.

There is also evidence that methane leaks from parts of the oil and gas industry could be significantly higher than some official estimates (Alvarez *et al*., 2018), which will increase short-term atmospheric methane emissions. Again, this is not reflected in current official emissions factors.

The practical upshot is that the climate mitigation potential for any reductions in natural gas (and to some extent all fossil fuel) consumption may be considerably higher than reflected in figures using official 100-year CO_2e emissions factors.

2.4 Calculating emissions

GHG assessments require two types of data: activity data and emission factors. Activity data is typically supplied by the reporting organisation and represents a level of activity (such as kilowatt-hours of electricity consumed, or litres of fuel combusted) reflecting the organisation's climate impact. GHG emissions estimates are then quantified from the activity data by applying the most relevant emission factor(s) from reputable sources.

An emission factor is a representative value that relates the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. Factors are typically available from government publications, independent agencies, and scientific research journals; however, the quality and accuracy of factors can vary. Factors can differ depending on the research body and/or underlying methodologies applied. It is therefore good practice to apply factors from reputable sources, such as the UK's Defra.

2.5 Reporting standards

GHG assessments are generally carried out in accordance with one of two recognised standards for accounting and reporting corporate GHG emissions. The best-known is the *"Greenhouse Gas Protocol Corporate Accounting and Reporting Standard"* (WRI and WBCSD, 2004) developed in a partnership of the World Business Council for Sustainable Development (WBCSD) and the World Resource Institute (WRI).

The International Organization for Standardization (ISO) also produced the *ISO14064*[1] specification series, detailing specification and guidance for the organisation and project levels, as well as for the validation and verification of emissions.

[1] 'ISO 14064 – Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.'

The CarbonNeutral® Protocol developed by Climate Impact Partners is an additional layer on top of the GHG Protocol and describes the requirements for achieving specific CarbonNeutral® compliant certifications (i.e., CarbonNeutral® 'Company', 'Product', 'Event' etc.).

2.6 Emissions scopes

Most standards break down emission sources into three categories, known as scopes.

2.6.1 Scope 1

Scope 1 accounts for direct emissions released from sources that are owned or controlled by the reporting company and may include corporate car fleets, on-site power generation, fuel combustion for heating and power, and any process emissions such as refrigerant gas losses.

2.6.2 Scope 2

Scope 2 accounts for indirect emissions associated with off-site generation of purchased energy, including electricity, heat, steam and cooling.

In 2015, the GHG Protocol published its Scope 2 Guidance, an amendment to the Corporate Standard (WRI and WBCSD, 2015). These guidelines state that any operations in markets providing product- or supplier-specific data in the form of contractual instruments shall report scope 2 emissions in two ways: based on the location-based method, and on the market-based method, with each result labelled accordingly. This is termed 'dual reporting'.

2.6.2.1 Location-based reporting

The location-based method reflects the average emissions intensity of grids on which energy consumption occurs. This applies to all locations where grids are used for the distribution of energy and where electricity demand causes the need for energy generation and distribution. Grid-average emission factors are used, based on statistical emissions information and electricity output, aggregated and averaged within a defined boundary and timeframe. This includes regional, sub-national and national production grid averages.

2.6.2.2 Market-based reporting

The market-based method reflects proportional emissions from specific electricity tariffs that consumers select in the market. Under this method an energy consumer uses the emissions factor associated with the qualifying contractual instruments it uses. Markets differ as to what contractual instruments are available, but these can include Energy Attribute Certificates (RECs, GOs, I-RECs), Power Purchase Agreements (PPAs) and green electricity products purchased from energy suppliers.

As per The CarbonNeutral® Protocol, zero emissions may only be awarded when double-counting is avoided. Organisations making a scope 2 reporting declaration in support of CarbonNeutral® certification must complete and sign a disclosure form provided by

Climate Impact Partners, which outlines the contractual instrument(s) purchased, the total consumption covered (MWh), and the reporting period it applies to.

If an organisation either does not have any such contracts or its instruments do not meet the quality criteria, a residual mix factor is applied representing untracked or unclaimed energy and emissions for that region. If the residual mix is not available, the location-based method is applied, in which case the market-based and location-based totals will be the same.

2.6.3 Scope 3

Scope 3 includes all other indirect emissions sources not accounted for within scope 1 and 2. The sources applicable will depend on a reporting organisation's activities but could include business travel, commuting, goods and services purchased, waste disposal, emissions from use of company-derived products or materials, and outsourced activities such as deliveries.

The GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (WRI and WBCSD, 2011) groups scope 3 emissions into 15 categories to provide a framework to organise, understand and report broader emissions.

The GHG Protocol describes the quantification of scope 1 and 2 as mandatory, whereas scope 3 emissions are optional. However, the CarbonNeutral® Protocol requires inclusion of certain scope 3 emissions (typically waste and business travel) depending on the certification targeted. Other scope 3 sources may be included at the discretion of the client.

Scope 3 activities can contribute a significant proportion of an organisation's overall emissions. To accurately reflect an organisation's holistic climate impact, it is thus advisable to assess and include all relevant sources.

2.7 Measuring climate impacts from aviation

To capture the overall aviation effects on climate – aside from the GHG emissions – the CarbonNeutral® Protocol strongly recommends clients to account for radiative forcing in their greenhouse gas assessment.

This is a result of unfolding evidence suggesting that high altitude jet fuel combustion also provokes non-greenhouse gas climate effects; such as aviation induced clouds or soot particles. Alternatively, clients may choose not to capture the non-GHG emissions, by excluding to account for radiative forcing.

2.8 GHG accounting principles

Nature Positive's approach to carbon accounting is to follow the GHG Protocol's core principles where possible:

- Relevance: selecting an appropriate inventory boundary that reflects the GHG activities of the company and serves the decision-making needs of users.
- Completeness: accounting for all emission sources within the chosen inventory boundary, with any specific exclusions disclosed and justified.

- Consistency: aiming to collect meaningful and consistent data over time whilst transparently documenting any significant changes to data quality and/or format.
- Transparency: addressing all relevant issues in a coherent and clear manner.
- Accuracy: minimising uncertainty and avoiding systematic over- or under-quantification of emissions, and ensuring any necessary estimates or assumptions required are conservative and guided by industry standards.

2.9 Data quality and accuracy

The accuracy of a GHG assessment is directly related to the quality of the activity data provided. Primary data should be used where available: this represents actual activities during the reporting period (such as metered kWh of electricity consumed).

Secondary data – in the form of estimates, extrapolations, modelling, benchmarks, industry averages or other proxy sources – may be used when reliable primary data is not available. Assessments based largely on secondary data should be viewed as an estimate of GHG emissions impact, and actual emissions may vary significantly.

Although comprehensive primary data may not always be available for all emissions sources, in general it is good practice to continually improve the proportion of primary data over time.

3 METHODOLOGY

3.1 Introduction

Promotional Products Association International ("PPAI" abbreviated) is a leader in the promotional products industry. This GHG assessment has been prepared by Nature Positive, on behalf of Climate Impact Partners, to estimate GHG emissions associated with the operations of the following PPAI events:

- Women's Leadership Conference (WLC):
    - Date: 25th June 2023 – 27th June 2023.
    - Location: Eagan, Minnesota, USA.
    - Floor area: 4,403 ft^2.
    - Staff: 13.
    - Contractors: 8-12.
    - Guests: 135.
- North American Leadership Conference (NALC):
    - Date: 5th June 2023 – 6th June 2023.
    - Location: Washington, DC, USA.
    - Floor area: 6,205 ft^2.
    - Staff: 12.
    - Contractors: 8-18.
    - Guests: 102.
- Product Responsibility Summit (PRS):
    - Date: 8th October 2023 – 10th October 2023.
    - Location: Alexandia, Virginia, USA.
    - Floor area: 5,525 ft^2.
    - Staff: 13.
    - Contractors: 0
    - Guests: 120.
- Legislative Education and Action Day (LEAD):
    - Data for this event was not recorded. No climate neutral claims were made at this event. The event consisted of a lobbying day on Capitol Hill and has no other conference event, so data collection was not carried out.

3.2 Approach

On project commencement, Nature Positive completed a quality assurance form to review all activity data provided. Conservative benchmarks and assumptions were used where necessary in line with good practice.

GHG emissions were then quantified by applying the most relevant emission factors. GHG emission factors relating to the 2023 reporting year are predominantly sourced from the 2023 *UK Government GHG Conversion Factors for Company Reporting* (July 2023) and from the US EPA's *Emission Factors Greenhouse Gas Inventories* (April 2023) as appropriate.

For air travel within this GHG assessment, PPAI chooses to account for radiative forcing (see section 2.7 for more detail).

NB: Results within the tables of this report are accurate to the number of significant figures presented. Any inconsistencies in totals versus individual values are due to rounding and should not be viewed as erroneous.

3.3 Operational boundary and data quality

Table 3 shows the operational boundary applied for this assessment along with an overview of the quality of data provided. Total primary data used for this assessment was approximately 99%.

3.3.1 Key data improvement recommendations

It is recommended that the following steps are considered to improve data quality for future assessments.

- Obtain energy consumption data from the event venue (e.g., hotel) for a more realistic representation of the emissions associated with energy used during the event.

Table 3: Operational boundary and data quality

Emissions source category	Required or recommended	Data provided
All direct emissions from on-site sources used to deliver the activity	Required	No primary data could be provided, so benchmark assumptions were applied to estimate mains gas consumption
Emissions from the consumption of purchased electricity (including transmission and distribution) and/or steam used in the delivery of the activity	Required	No primary data could be provided, so benchmark assumptions were applied to estimate electricity consumption
Travel of employees/ contractors - by air, public transport, rented/leased vehicle and taxi - involved in the delivery of the activity	Required	Primary data provided (distance travelled per transport mode, and hotel stays)
Travel of individuals to and from the activity - by air, public transport, rented/leased vehicle and taxi; plus hotel accommodation	Recommended	Primary data provided (distance travelled per transport mode, and hotel stays)
Waste disposal	Required	No primary data could be provided, so benchmark assumptions were applied to estimate waste

Notes:

Transmission and Distribution (T&D) losses refer to the scope 3 emissions associated with grid losses (the energy loss that occurs in getting the electricity from the power plant to the organisations that purchase it).

3.4 Key assumptions

Upon completion of the quality assurance phase, the following assumptions were agreed with the client:

- For all three events, no data was available relating to mains gas usage; therefore, data has been assumed using a benchmark of 400 kWh/m^2/annum as typical practice, as it was assumed that the energy consumption profile of a hotel is an accurate representation of each of the locations for the four events (CIBSE Guide F).
- For all three events, no data was available relating to electricity usage; therefore, data has been assumed using a benchmark of 140 kWh/m^2/annum as typical practice, given that it was assumed that the energy consumption profile of a hotel is an accurate representation of each of the locations for the four events (CIBSE Guide F).
- For all three events, no data was available relating to waste; therefore, data has been assumed as 1.89 kg per event attendee/guest per day, with 1.16 kg going

to landfilled waste and the remainder going to recycled waste and/or composted waste if applicable (Meet Green[2]).

[2] https://www.meetgreen.com/wordpress/wp-content/uploads/2017/09/eventfoot.pdf

4 RESULTS

4.1 GHG emissions summary

Table 4 and Figure 1 shows total GHG emissions estimated during the three events segregated for each applicable source.

Table 4: 2023 Event GHG emissions summary (market-based)

Emissions source category	Sub source category	GHG emissions (tCO_2e)
All direct emissions from on-site sources used to deliver the activity	Mains gas	0.8
Emissions from the consumption of purchased electricity (including transmission and distribution) and/or steam used in the delivery of the activity	Electricity consumption	0.6
	Electricity T&D	<0.1
Travel of employees/ contractors - by air, public transport, rented/leased vehicle and taxi - involved in the delivery of the activity	Staff travel (aviation)	24.7
	Staff travel (taxi/car/bus)	1.0
	Staff hotel stays	1.2
Travel of individuals to and from the activity - by air, public transport, rented/leased vehicle and taxi; plus hotel accommodation	Guest travel (aviation)	189.0
	Guest travel (taxi/car)	1.3
	Guest hotel stays	11.4
Waste disposal	Landfilled	0.7
	Recycled	0.1
	Composted	<0.1
Total GHG emissions		**230.8**

Notes:

1. The market-based approach for calculating electricity emissions was equivalent to the location-based approach for calculating electricity emissions. This is consistent throughout the report.

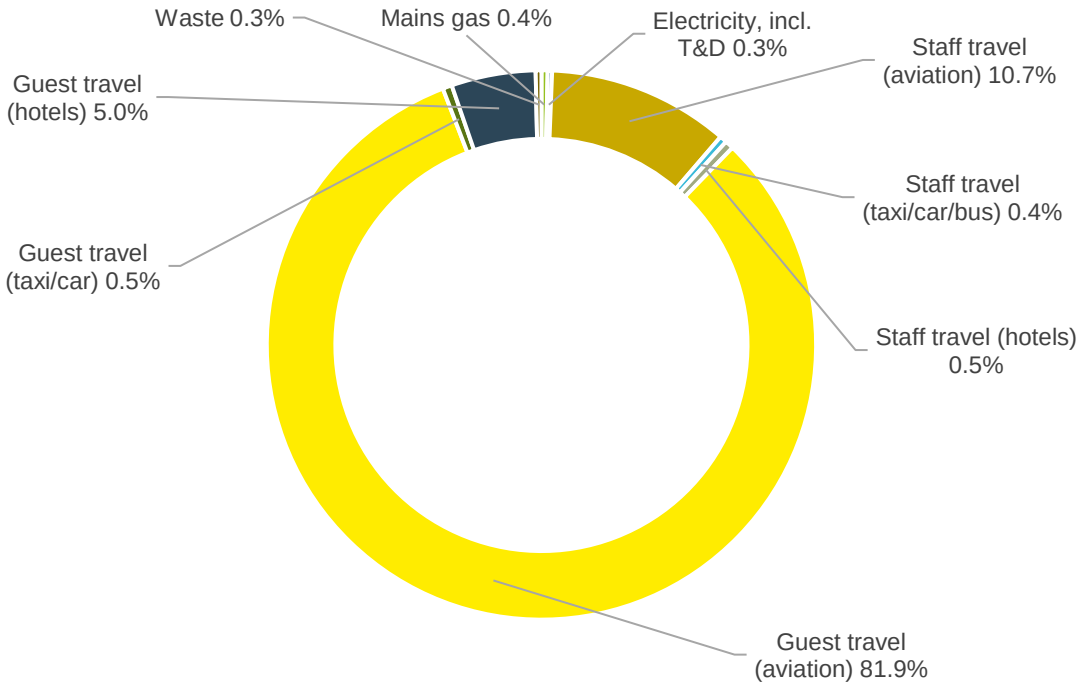

Figure 1. Market- based GHG emissions by scope (tCO_2e)

Guest travel (aviation) accounts for the largest proportion of all three event emissions (81.9%), followed by staff travel (aviation) (10.7%), guest travel (hotels) (5.0%), guest travel (taxi/car) (0.5%), staff travel (hotels) (0.5%), staff travel (taxi/car/bus) (0.4%), mains gas (0.4%), waste (0.3%), and electricity including T&D (0.3%).

4.2 GHG emissions – Women's Leadership Conference

Table 5 and Figure 2 shows total GHG emissions estimated during the event for the WLC segregated for each applicable source.

Table 5: Event GHG emissions for 2023 Women's Leadership Conference (market-based)

Emissions source category	Sub source category	GHG emissions (tCO_2e)
All direct emissions from on-site sources used to deliver the activity	Mains gas	0.2
Emissions from the consumption of purchased electricity (including transmission and distribution) and/or steam used in the delivery of the activity	Electricity consumption	0.2
	Electricity T&D	<0.1
Travel of employees/ contractors - by air, public transport, rented/leased vehicle and taxi - involved in the delivery of the activity	Staff travel (aviation)	6.5
	Staff travel (taxi)	0.1
	Contractor (cars)	<0.1
	Contractor (bus)	<0.1
	Staff hotel stays	0.4
Travel of individuals to and from the activity - by air, public transport, rented/leased vehicle and taxi; plus hotel accommodation	Guest travel (aviation)	62.0
	Guest travel (taxi)	0.3
	Guest travel (cars)	0.2
	Guest hotel stays	4.3
Waste disposal	Landfilled	0.3
	Recycled	<0.1
Total GHG emissions		**74.7**

Notes:

2. The market-based approach for calculating electricity emissions was equivalent to the location-based approach for calculating electricity emissions. This is consistent throughout the report.

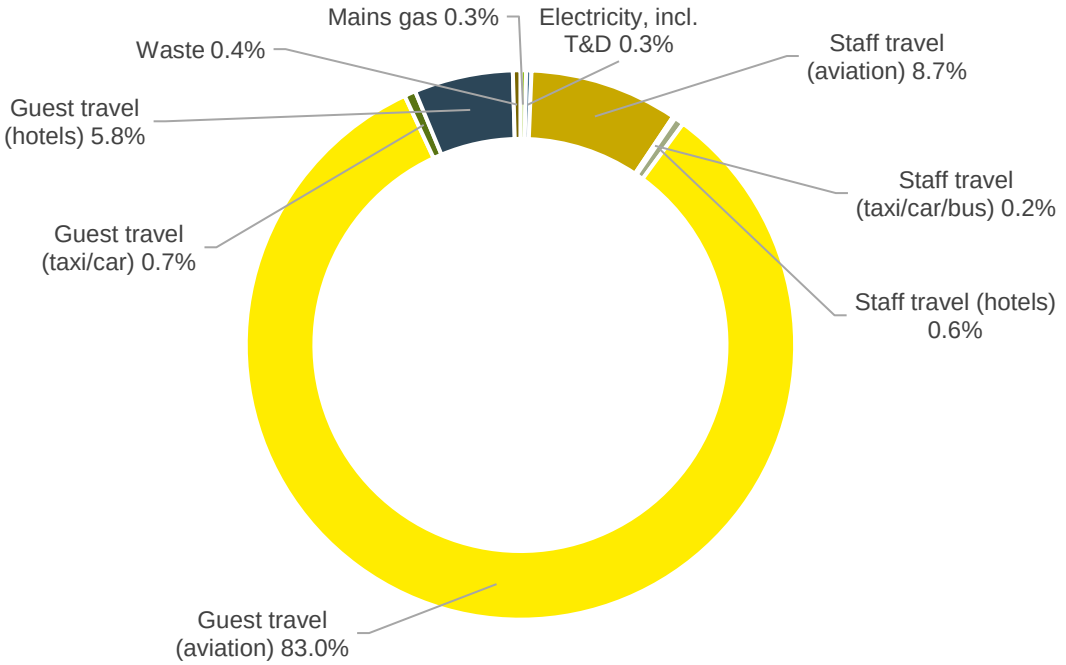

Figure 2. Market- based GHG emissions by scope (tCO_2e) – WLC

Guest travel (aviation) accounts for the largest proportion of emissions (83.0%), followed by staff travel (aviation) (8.7%), guest travel (hotels) (5.8%), guest travel (taxi/car) (0.7%), staff travel (hotels) (0.6%), waste (0.4%), mains gas (0.3%), electricity including T&D (0.3%) and staff travel (taxi/car/bus) (0.2%).

4.3 GHG emissions – North American Leadership Conference

Table 6 and Figure 3 shows total GHG emissions estimated during the event for the NALC segregated for each applicable source.

Table 6: Event GHG emissions for 2023 North American Leadership Conference (market-based)

Emissions source category	Sub source category	GHG emissions (tCO_2e)
All direct emissions from on-site sources used to deliver the activity	Mains gas	0.3
Emissions from the consumption of purchased electricity (including transmission and distribution) and/or steam used in the delivery of the activity	Electricity consumption	0.2
	Electricity T&D	<0.1
Travel of employees/ contractors - by air, public transport, rented/leased vehicle and taxi - involved in the delivery of the activity	Staff travel (aviation)	8.4
	Staff travel (taxi)	<0.1
	Contractor (cars)	<0.1
	Contractor (bus)	<0.1
	Staff hotel stays	0.4
Travel of individuals to and from the activity - by air, public transport, rented/leased vehicle and taxi; plus hotel accommodation	Guest travel (aviation)	58.6
	Guest travel (taxi)	0.3
	Guest travel (cars)	<0.1
	Guest hotel stays	3.2
Waste disposal	Landfilled	0.2
	Recycled	<0.1
Total GHG emissions		**71.7**

Notes:

3. The market-based approach for calculating electricity emissions was equivalent to the location-based approach for calculating electricity emissions. This is consistent throughout the report.

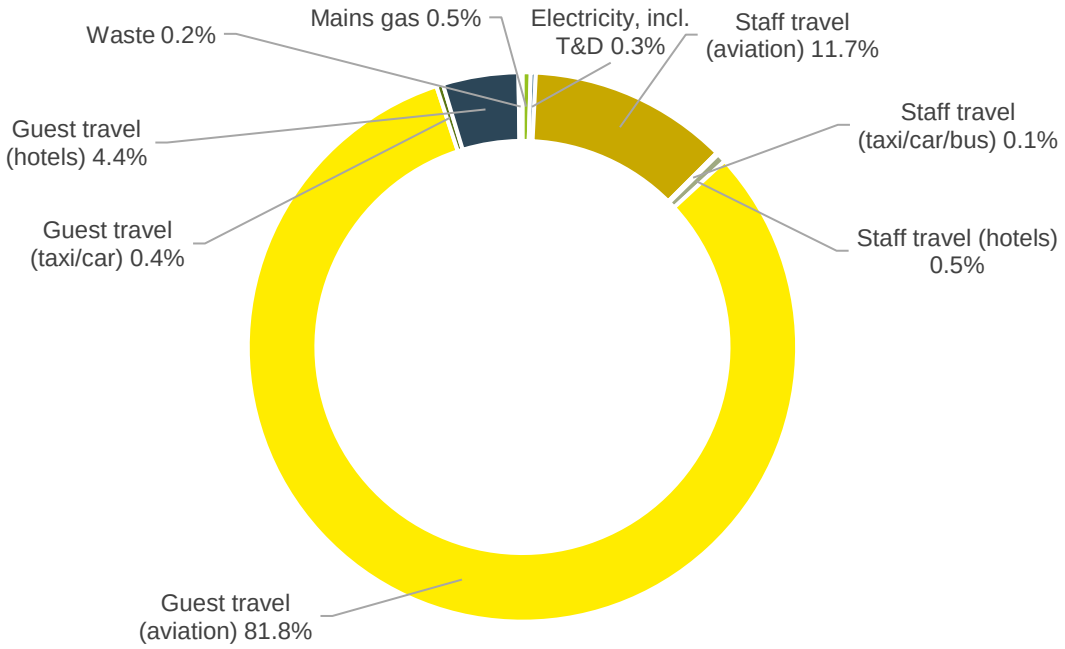

Figure 3. Market- based GHG emissions by scope (tCO_2e) – NALC

Guest travel (aviation) accounts for the largest proportion of emissions (81.8%), followed by staff travel (aviation) (11.7%), guest travel (hotels) (4.4%), staff travel (hotels) (0.5%), mains gas (0.5%), guest travel (taxi/car) (0.4%), electricity including T&D (0.3%) waste (0.2%) and staff travel (taxi/car/bus) (0.1%).

4.4 GHG emissions – Product Responsibility Summit

Table 7 and Figure 4 shows total GHG emissions estimated during the event for the PRS segregated for each applicable source.

Table 7: Event GHG emissions for 2023 Product Responsibility Summit (market-based)

Emissions source category	Sub source category	GHG emissions (tCO_2e)
All direct emissions from on-site sources used to deliver the activity	Mains gas	0.2
Emissions from the consumption of purchased electricity (including transmission and distribution) and/or steam used in the delivery of the activity	Electricity consumption	0.1
	Electricity T&D	<0.1
Travel of employees/ contractors - by air, public transport, rented/leased vehicle and taxi - involved in the delivery of the activity	Staff travel (aviation)	9.7
	Staff travel (taxi)	<0.1
	Contractor (cars)	0.8
	Contractor (bus)	-
	Staff hotel stays	0.4
Travel of individuals to and from the activity - by air, public transport, rented/leased vehicle and taxi; plus hotel accommodation	Guest travel (aviation)	68.4
	Guest travel (taxi)	0.3
	Guest travel (cars)	0.1
	Guest hotel stays	3.9
Waste disposal	Landfilled	0.3
	Recycled	<0.1
	Composted	<0.1
Total GHG emissions		**84.4**

Notes:

4. The market-based approach for calculating electricity emissions was equivalent to the location-based approach for calculating electricity emissions. This is consistent throughout the report.

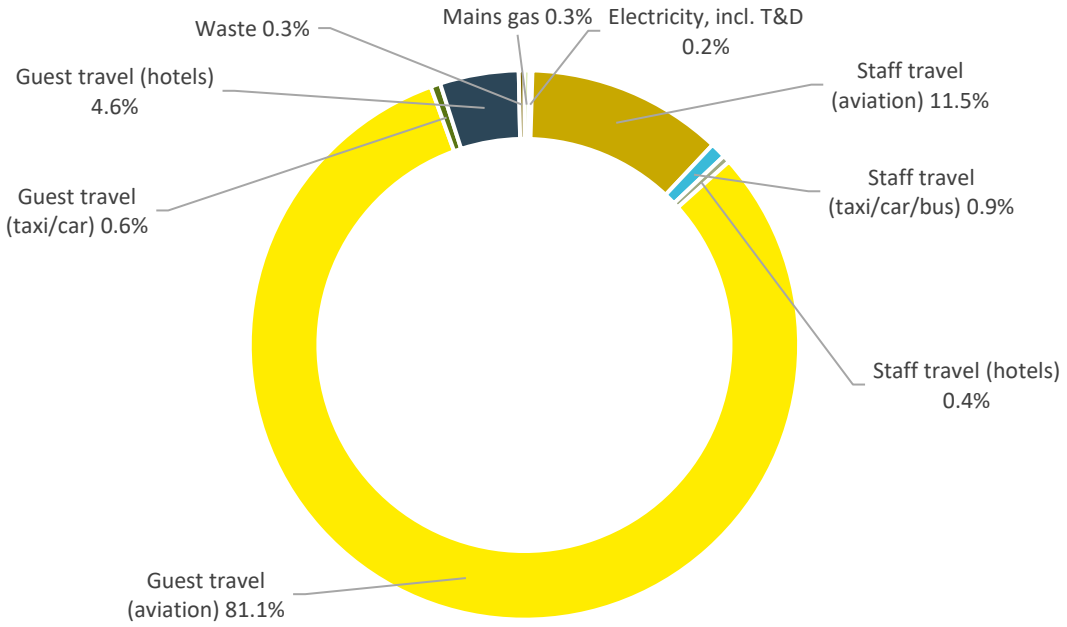

Figure 4. Market- based GHG emissions by scope (tCO_2e) – PRS

Guest travel (aviation) accounts for the largest proportion of emissions (81.1%), followed by staff travel (aviation) (11.5%), guest travel (hotels) (4.6%), staff travel (taxi/car/bus) (0.9%), guest travel (taxi/car) (0.6%), staff travel (hotels) (0.4%), mains gas (0.3%), waste (0.3%), and electricity including T&D (0.2%).

4.5 GHG emissions – Legislative Education and Action Day

Data for this event was not recorded. No climate neutral claims were made at this event. The event consisted of a lobbying day on Capitol Hill and has no other conference event, so data collection was not carried out.

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