



# GHG EMISSIONS MEASUREMENT AND VERIFICATION REPORT OF THE EVENT TITLED “BRIDGES BY RARE 2024”

**Prepared by NettZero Environmental Advisory Technologies Private Limited**



EVENT HELD ON 4TH, 5TH & 6TH APRIL

AT

THE ROSEATE, NEW DELHI

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# FOUNDER'S MESSAGE- RARE

“

For many of our hotels consciously and unconsciously - sustainable operations has been a journey from the time they began. Most doing silent work in their respective places, suddenly we are surrounded by claims of sustainability like never before. We have long been using self-audit as a means to understand each hotelier's / experience curator's ethos and action. The most logical step in this direction is to authenticate all claims and measuring our 'carbon' consumption seems to be the most logical and scientific way to verify all claims. And then we discovered you... and the group formed organically holding up various aspects of Carbon accounting - all thanks to Hashim. Impart Marketing, Indian School for Nature and NettZero forming the perfect cohort to build on this idea.

”



**Shobha Mohan**

Founder, Visionary and Enchanting  
Storyteller, @RARE since 2004



# ABOUT



NettZero Environmental Advisory Technologies Pvt. Ltd. is a leading Carbon Ecosystem Enabler that provides People, Processes and Technologies to organisations desirous of embracing sustainability in a quantifiable & measurable manner.

NettZero's focuses on:

- Climate Literacy - for providing bespoke orientation & education in the field of Sustainability, Carbon Management and Climate Change
- GHG Accounting & Carbon Neutrality - for providing organisations with a robust technology platform & process to inventory their emissions across Scope 1, Scope 2 and, especially, Scope 3. The enablement involves providing data driven visual reports, mitigation strategies and offsetting of unavoidable emissions through curated Carbon Credits
- Carbon Credits - by developing projects & programs that are focussed on CDR (Carbon Dioxide Removal) and can generate significant additionality based Carbon Credits



## Some Distinctions

- Measurement, inventorying and offset of over 50,000 tCO<sub>2</sub>e
- Helped Create Asia's first Carbon Neutral College
- Helped Create Asia's first Carbon Neutral Hospitality Chain
- Measuring the Carbon Footprint of the Indian Premier League on behalf of the UNEP (under No2Co2)
- Recognized by Niti Ayog as one of the Top 75 ideas to shape the planet from amongst 3,000+ submissions sent in by 160 countries





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**DAYS**

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**PARTICIPANTS**



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**ATTENDEES**



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**SESSIONS & PANEL DISCUSSIONS**

Challenges and Solutions



# KEY INFORMATION ABOUT THE EVENT

<b>Event Name</b>	BRIDGES by RARE 2024
<b>Physical Boundary</b>	The boundary consists of physical boundary of the event which happened in New Delhi at The Roseate, National Highway 8, D Block, Samalka, New Delhi, Delhi 110037
<b>Event Dates</b>	4th, 5th & 6th April 2024
<b>Emission Sources</b>	<p><b>Scope 1 Activities:</b> *Fuel Combustion on site (Including LPG and Diesel)</p> <p><b>Scope 2 Activities:</b> *Consumption of Purchased Electricity</p> <p><b>Scope 3 Activities:</b> *Delegates Travel *Waste Generation *Food Consumption *Water Consumption</p>
<b>RARE Contact Person</b>	<b>Ms. Shobhana Jain</b> Sustainability, Branding and Communications @RARE
<b>Date of Report</b>	<b>30th April 2024</b>
<b>Report Prepared By</b>	<b>NettZero Environmental Advisory Technologies Private Limited</b> Ms Vidhi Gaur Email:partnerships@nettzero.world Website: https://nettzero.world/



MEASURE, REDUCE AND REPORT

## EVENT ACTIVITIES

Event Venue



Meetings with Hoteliers and Experience Curators, Chini and Ballroom



Catalyst Talks and Panel Discussions



## EVENT ACTIVITIES

### Yoga Sessions, Impromptu Breakouts Area & Workshops



### Music Night & Award Ceremony



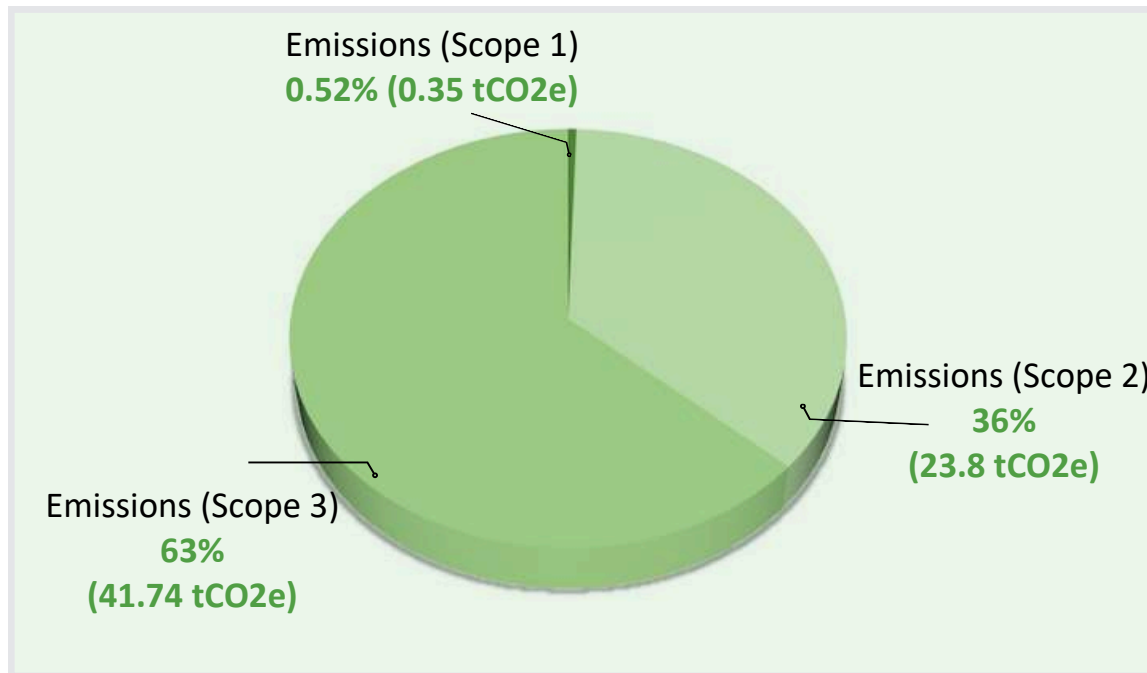


# EXECUTIVE SUMMARY

The detailed report encapsulates the comprehensive **GHG Emissions Measurement for the BRIDGES by RARE 2024 event at The Roseate, New Delhi**. The Roseate property was exclusively secured by the RARE from April 4th to 6th, 2024, for the event, with NettZero appointed to oversee the Emissions Assessment Process. Through rigorous data collection and analysis, emissions across various scopes were quantified to provide a holistic understanding of the event's environmental impact.

Sources	Emission Activity	Emissions (tCO2e)	Scope Wise Emissions	% Emissions
Total Scope 1 Emission	LPG Combustion	0.35	0.36	0.52
	Fuel Combustion	0.01		0.02
Total Scope 2 Emission	Electricity Consumption	23.80	23.80	36.12
Total Scope 3 Emission	Travel- International Delegates	10.56	41.74	16.03
	Travel- National Delegates	26.82		40.70
	Travel- Local Delegates	2.50		3.79
	Travel- Organizers and Sponsors	0.23		0.35
	Waste Generation	0.01		0.01
	Water Consumption	0.02		0.03
	Food Consumption	1.60		2.43

- **Scope 1 emissions**, primarily stemming from LPG and fuel consumption, amounted to **0.345 tCO2e** and **0.0135 tCO2e** respectively.
- **Scope 2 emissions**, attributed to electricity consumption, totaled **23.8 tCO2e**. Notably, efforts to reduce Scope 2 emissions through renewable energy sources, such as solar panels, were considered.
- **Scope 3 emissions**, encompassing travel and food consumption, were also assessed. Travel emissions, including both national and international delegates, amounted to **37.38 tCO2e**. Additionally, local delegate travel contributed **2.43 tCO2e**, highlighting the significance of transportation choices.
- Indirect emissions from waste and water consumption were considered, with waste contributing **0.0052 tCO2e** and water consumption resulting in **0.02 tCO2e**. Furthermore, a detailed analysis of food emissions revealed a total of **1.6 tCO2e**, emphasizing the importance of sustainable dietary choices.



**Graph 1: Scope-wise emissions & their percentage distribution**

This comprehensive analysis delves into the intricate patterns of carbon emissions at the BRIDGES by RARE event, offering valuable insights into their distribution across different scopes.

At the forefront of this examination is Scope 3 emissions, representing a substantial **63.34%** of the total carbon footprint. These emissions, primarily stemming from travel-related activities and other indirect sources, dominate the landscape of environmental impact.

Meanwhile, Scope 2 emissions maintain a significant presence, accounting for **36.12%** of the overall emissions profile, casting a profound influence on emissions coming from electricity consumption.

In contrast, Scope 1 emissions, though modest at **0.52%**, remain an integral component of the carbon picture, warranting careful consideration in accounting strategies even if it is minuscule.



# INTRODUCTION

## 5.1 BRIDGES by RARE- An Overview

RARE India has introduced **BRIDGES 2024**—to unite an even larger community of change-makers committed to reshaping tourism.

**BRIDGES served as a platform showcasing hotels, destinations, and experiences united in their commitment to promoting tourism as a force for positive change.** From innovative design to strategic locations, and sustainable operations to immersive experiences, the participating entities spearheaded the narrative of exceptional destination experiences. Each establishment boasted a unique tale, spotlighting decisions that had not only enriched the local community and destination but also resonated with discerning travelers seeking meaningful engagements.

**This event served as a catalyst for advancing the ethos of responsible tourism, elevating the discourse on sustainability within the hospitality industry.** BRIDGES was not merely an exhibition but a convergence of like-minded individuals and organizations dedicated to shaping a more inclusive and environmentally-conscious future for travel. Through curated discussions, immersive experiences, and collaborative initiatives, **BRIDGES aimed to inspire and empower stakeholders to embrace innovative practices that prioritize the well-being of communities, destinations, and the planet.**



## 5.2 Scope of the Report

The purpose of this report is to provide a comprehensive carbon assessment of the BRIDGES by RARE event held at The Roseate, New Delhi on the 4th, 5th, and 6th of April 2024. BRIDGES by RARE aspires to be a pioneering Carbon Neutral Event, setting a precedent in the Indian travel industry.

The scope of this report extends beyond mere documentation; it encapsulates BRIDGES by RARE's proactive approach towards enhancing its sustainability journey. **By quantifying every aspect of its carbon footprint, including Scope 1, Scope 2, and partial Scope 3 emissions, the event aims to provide a transparent account of its environmental impact.** This endeavor signifies a significant milestone in the event's evolution, positioning it as a frontrunner in sustainable event management practices within the industry.

**This event stands as one of India's first travel events to undertake a thorough inventory of Greenhouse Gas emissions, aligning with globally instituted norms and standards.** Moreover, BRIDGES by RARE goes beyond mere measurement; it proactively takes steps toward mitigation and offsets through the procurement of globally validated credits.

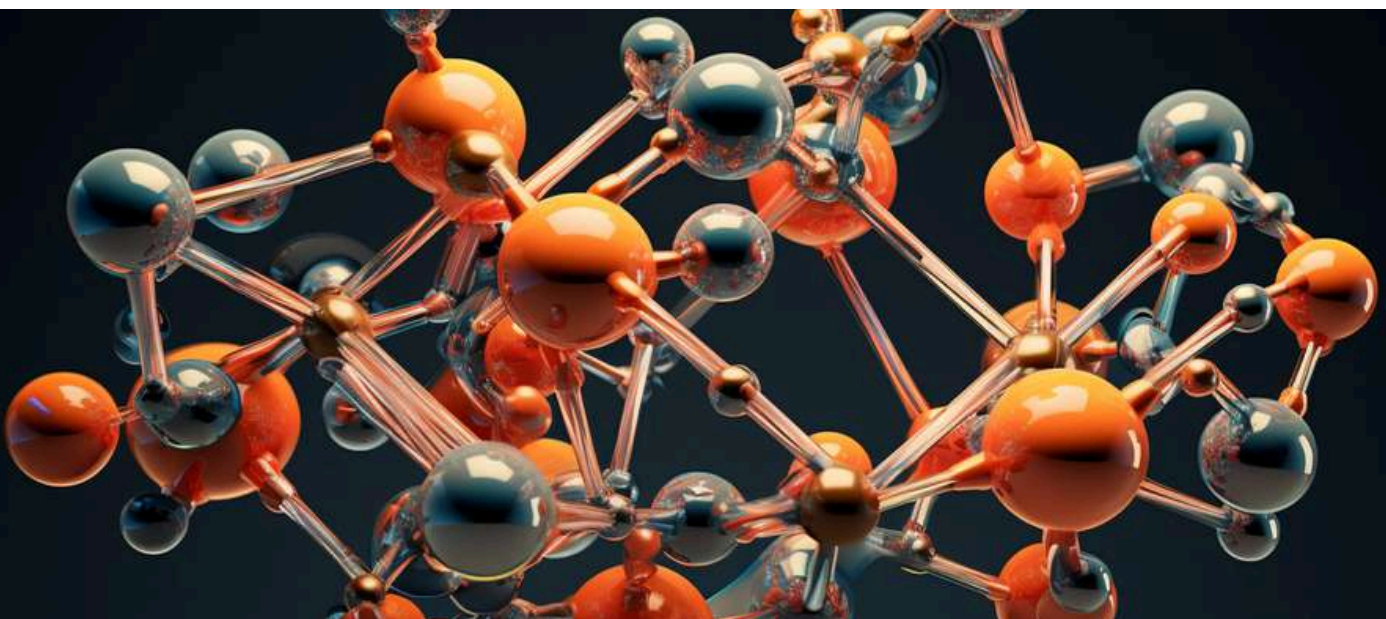
Through this report, BRIDGES by RARE seeks to inspire and empower other industry stakeholders to embrace sustainability wholeheartedly. By transparently documenting its carbon assessment journey, including challenges faced and lessons learned, BRIDGES by RARE aims to catalyze a paradigm shift towards more eco-conscious practices within the broader travel and event management sectors.





## 5.3 Importance of Carbon Assessment in Event Planning and Management

- **Carbon assessment holds significant importance in event planning and management, serving as a cornerstone for understanding and mitigating the environmental impact of large-scale gatherings.**
- The process of hosting a carbon-neutral event underscores a commitment to sustainability and responsible resource management.
- By conducting thorough carbon assessments, event organizers gain valuable insights into the emissions generated throughout the event's duration, enabling them to implement strategies aimed at reducing their carbon footprint.
- By quantifying emissions and establishing benchmarks, organizers can evaluate the effectiveness of mitigation efforts and identify areas for improvement.
- This iterative approach fosters continuous learning and drives innovation in sustainable event management practices.
- Moreover, carbon assessment helps events align with global sustainability standards and initiatives, enhancing their credibility and reputation as environmentally responsible entities.
- By demonstrating a commitment to reducing carbon emissions, events can attract environmentally conscious attendees, sponsors, and partners, thereby fostering a culture of sustainability within the industry.



## 5.4 What is a Carbon Neutral Event?

**Achieving carbon neutrality involves balancing the amount of carbon dioxide and other greenhouse gases emitted with an equivalent amount of carbon removal or reduction activities.**

To qualify as carbon-neutral, an event must meticulously assess and account for its carbon footprint across various stages, including energy consumption, transportation, waste generation, and venue operations. This assessment typically encompasses three scopes of emissions:

**Scope 1:** Direct emissions generated from sources **that are owned or controlled by the event organizers**, such as on-site fuel combustion and vehicle fleets.

**Scope 2:** Indirect emissions resulting from the **consumption of purchased electricity, heat, or steam, often associated with the event venue's energy usage.**

**Scope 3:** Indirect emissions originating from **sources not owned or directly controlled by the event**, including attendee travel, accommodation, catering, and supply chain activities.



In summary, a carbon-neutral event signifies a conscientious approach to event planning and execution, where efforts are made to mitigate and offset greenhouse gas emissions. As the global community increasingly recognizes the urgency of addressing climate change, carbon-neutral events serve as exemplars of proactive measures taken to minimize environmental impact while fostering meaningful experiences.



# THE NETTZERO APPROACH

## 6.1 Boundary Setting

In GHG Emissions Measurement, Boundary Setting plays an important role which refers to defining the scope or limits within which emissions are measured and reported. This involves determining which emissions sources and activities will be included in the calculation and which ones will be excluded.

	Activities	Inclusion
Scope 1	Fuel Consumption	✓
Scope 2	Purchased Electricity	✓
Scope 3	Purchased Goods and Services)	NA
	Capital Goods	NA
	Other Fuel and Energy Related Activities	Already added in Scope 1 & 2
	Upstream transportation and Distribution	NA
	Water & Food Consumption	✓
	Waste Generated	✓
	Business Travel	✓
	Employee Commuting	✓
	Upstream Leased Assets	NA
	Downstream Transportation and Distribution	NA
	Processing of sold Products	NA
	Use of sold Products	NA
	End-of-life Treatment of Sold Products	NA
	Downstream Leased Assets	NA
	Franchises	NA
Investments	NA	

In **organizational boundary setting**, the report focuses on the **physical location of The Roseate, situated at National Highway 8, D Block, Samalka, New Delhi, Delhi 110037**. This choice allows for a detailed analysis of carbon emissions confined to the venue premises.

## 6.2 GHG Accounting Methodology

GHG Accounting Methodology refers to the systematic approach and set of procedures used to quantify, track, and report greenhouse gas emissions (GHGs) and carbon dioxide equivalents (CO<sub>2</sub>e) associated with an organization's activities.

This structured approach enables entities, including RARE, to measure their carbon footprint accurately, supporting informed decision-making and sustainable practices.

Consequently, this report adheres strictly to ISO 14068-1:2023 guidelines and specifications, following the Greenhouse Gas Protocol (GHG Protocol) and The N.E.X.T Protocol for accurate emissions quantification of BRIDGES by RARE 2024.



### The methodology can be summarized as follows:

- **Identification of Emission Sources:** Thoroughly identifying the sources of emissions specific to BRIDGES's location.
- **Collection of GHG Activity Data:** Comprehensive data on activities and processes contributing to greenhouse gas emissions within the boundary of BRIDGES's location was gathered.
- **Selection of Emissions Factors:** Carefully choosing emissions factors relevant to the operations to ensure accurate quantification.
- **Selection of Quantification Methodology:** Employing a well-defined quantification methodology tailored to the unique context of each emitting source.
- **Calculation of Greenhouse Gas Emissions:** Precise calculations are performed to determine the BRIDGES's greenhouse gas emissions profile.

## 6.3 Adopted Carbon Accounting Standards (GHG Protocol, ISO 14068 & The N.E.X.T. Protocol)

The **GHG Protocol**, developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), serves as a comprehensive framework for quantifying and managing greenhouse gas emissions. It provides organizations with a standardized methodology for measuring and reporting emissions, enabling them to better understand their environmental impact and identify areas for improvement. This transparency is vital in fostering accountability and encouraging companies to reduce their carbon footprint.



**ISO 14068** offers a comprehensive framework for attaining and showcasing carbon neutrality. It emphasizes the quantification, reduction, and offsetting of carbon footprints, employing a hierarchical strategy that prioritizes direct and indirect greenhouse gas (GHG) emission reductions and removal enhancements across the value chain before resorting to offsetting.

The **N.E.X.T. Protocol**, or **NettZero Environmental eXcellence & Transformation Protocol**, stands as a pioneering framework, distinctively focusing on carbon accounting and Scope 3 emissions. NettZero has synthesized the best-in-class recommendations from the world's top standards, such as GHG, PAS 2060, ISO 14068-1: 2023, GRI, and BRSR, to create our own best-in-class standard.





# TOTAL EMISSIONS ACROSS ALL SCOPE

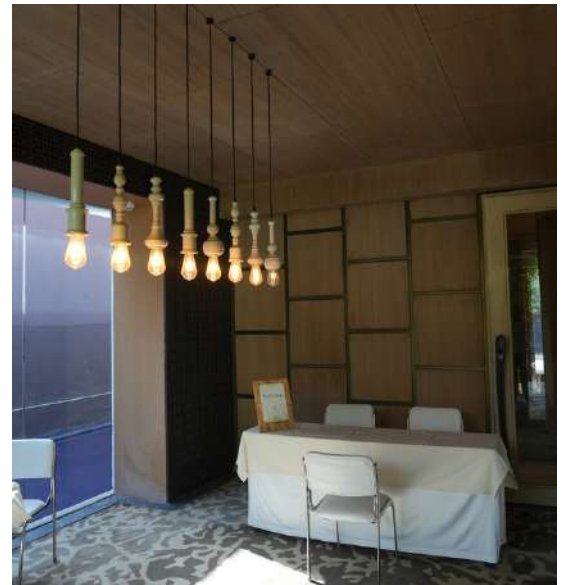
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# GHG ACCOUNTING OF BRIDGES

## 7.1 Direct Emissions from LPG Consumption (Scope 1)

Since the entire property of the Roseate was taken over by the Bridges event, emissions from fuel combustion activities are included in Scope 1 instead of Scope 3.

- During the three-day event at The Roseate, New Delhi, **eight LPG cylinders were used, each containing 27.8 liters.**
- Total LPG consumption amounted to **222.4 liters.**
- This consumption resulted in carbon emissions of **0.345 tCO<sub>2</sub>e.**



## 7.2 Direct Emissions from Fuel consumption (Scope 1)

During the event at The Roseate, New Delhi, diesel consumption in generator (DG) sets was necessitated due to a brief power outage.

Despite its minimal consumption, it has been included to maintain accuracy and transparency in calculations.

- 5 liters of diesel fuel used
- Approximate emissions: **0.0135 tCO<sub>2</sub>e**



## 7.3 Indirect Emissions from Electricity Consumption (Scope 2)

Dates	Consumption breakdown
3rd April	6,720 kWh
4th April	7,680 kWh
5th April	7,200 kWh
6th April	7,800 kWh

- Total electricity consumption over three days: **29,400 kWh**
- Total emissions from electricity consumption: **24 tCO<sub>2</sub>e**

Solar Panels	204
Combined capacity	61.2 kWp (300 W per panel)
Solar Energy	335.58 kWh

- These solar panels contribute to emissions reduction by harnessing renewable energy.
- Emissions reduction from solar panels: **0.274 tCO<sub>2</sub>e**

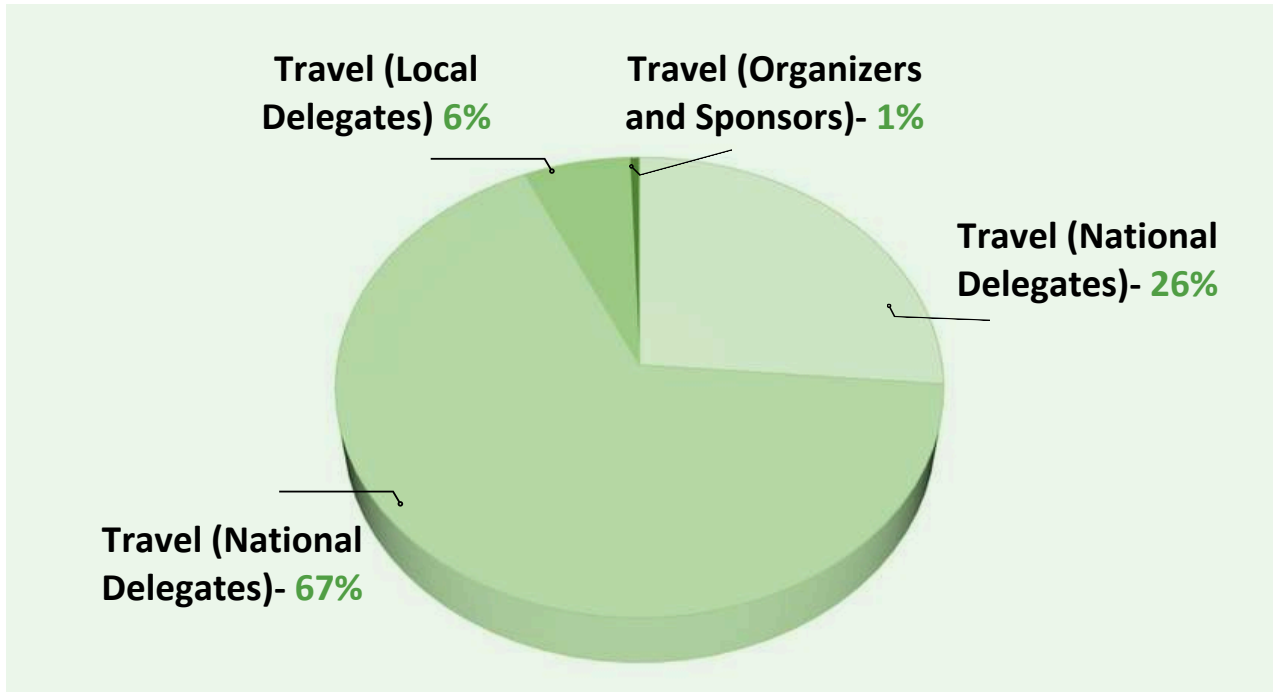
Taking into account both the electricity consumption and the emissions reduction from solar panels, the net Scope 2 emissions for the three-day period amounted to **23.8 tCO<sub>2</sub>e**.

This comprehensive assessment underscores the importance of considering both consumption and mitigation measures to accurately quantify indirect emissions from electricity usage.





## 7.4 Travel Emission Distribution



**Graph 2: Percentage Contribution of the Delegates Travel**

- International delegates account for **26%** of total travel emissions, signifying a significant portion attributed to long-distance travel.
- Only **18%** of international travel emissions are considered, with a detailed breakdown available in the annex.
- National delegates contribute the largest share at **67%**, highlighting the substantial impact of domestic travel.
- Local delegates and organizers/sponsors represent smaller portions, contributing 6% and 1% of travel emissions, respectively.
- This breakdown provides insights into diverse travel patterns among event participants and emphasizes the importance of considering different travel segments in emission reduction strategies.

## 7.4.1 Indirect Emissions- International Delegate Travel (Scope 3)

- Total Air Distance Traveled by International Delegates: **333,914 kilometers**
- Countries: Australia, Israel, New Zealand, Russia, Switzerland, Thailand, UK, USA, Tunisia
- Total Emissions from Delegate Travel: **58.7 tCO<sub>2</sub>e**

In light of the fact that delegates traveling from abroad are not solely coming for the RARE event but are extended their stay in India, it becomes crucial to determine how emissions should be factored into BRIDGES by RARE account.

To accurately account for these emissions, a **Delegate Emissions Estimation Document (D.E.E.D)** was circulated by **NettZero**, after calculation and quantification to determine the percentage of delegate air travel emissions that should be factored into BRIDGES by RARE, it is **determined that 12% of the emissions should indeed be factored into the assessment process, with an additional 6% margin of error** (*check Annex for more details*). This adjustment is made to reflect the variability and uncertainty associated with estimating delegate emissions. Therefore, the total emissions from international travel are calculated as **18% of 58.7 tCO<sub>2</sub>e**, resulting in **10.56 tCO<sub>2</sub>e**.

## 7.4.2 Indirect Emissions- National Delegate Travel (Scope 3)

- Total Air/ Land Travel distance: **152,524 kilometers**
- Cities: Leh, Cochin, Srinagar, Manali, Dharamshala, Mumbai, Rishikesh, Corbett, Udaipur, Jodhpur, Jaipur, Ranthambore, Karauli, Sariska, Bandhavgarh, Bhopal, Panna, Guwahati, Calcutta, Coimbatore, Chennai, Bangalore, Nashik, Goa, Nagpur, Kathmandu, Ahmendabad
- Resulting emissions: **26.82 tCO<sub>2</sub>e**



### 7.4.3 Indirect Emissions- Local Delegate Travel (Scope 3)

The emissions assessment for local delegates attending the RARE event involved an examination of various factors.

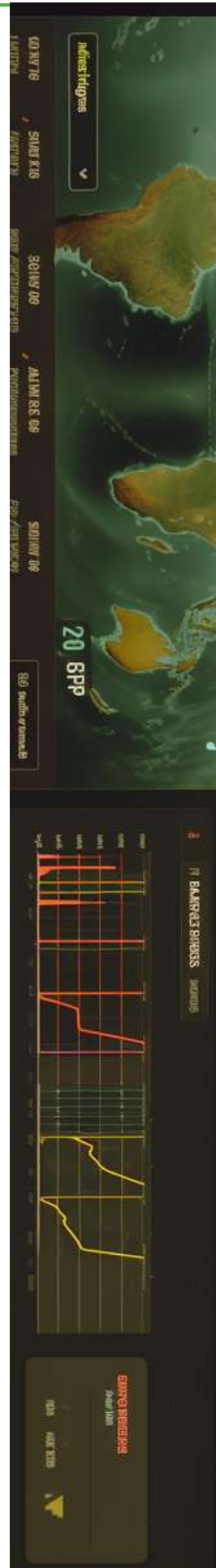
- With a total of **370 delegates** in attendance and an **uncertainty factor of 20%** duly considered, the individual travel distance was estimated at **50 kilometers** per delegate. *(Please refer to Annex)*
- This estimation was derived from a sample size of 50 individuals, primarily utilizing car travel as the predominant mode of transportation.
- Consequently, the total emissions were calculated as **2.5tCO<sub>2</sub>e**.
- By considering factors such as the number of delegates, the uncertainty factor, individual travel distance, mode of transportation, and emissions factor, a precise estimation of emissions was derived.

### 7.4.4 Indirect Emissions- Organizers and Sponsors (Scope 3)

Indirect emissions from organizers and sponsors encompass travel via both air and road transport modes.

- Air travel distance: **1,148 kilometers**
- Total emissions from air travel: **0.6 tCO<sub>2</sub>e**
- Road travel distance (including taxi and car): **1,408 kilometers**
- Total emissions from road travel: **0.23 tCO<sub>2</sub>e**

*This includes the travel by the RARE and NettZero teams.*





## 7.5 Indirect Emissions- Waste Generation (Scope 3)

- **40 kilograms of mixed organic waste** produced during the event (**datasets provided by The Roseate Staff**).
- Total emissions are calculated as **0.0052 tCO<sub>2</sub>e**.
- Emphasizes the importance of sustainable waste management practices in reducing the event's carbon footprint.



## 7.6 Indirect Emissions- Water Consumption (Scope 3)

- Total water consumption over 3 days: **30 cubic meters (equivalent to 30,000 liters)**.
- The other consumable water is derived from an innovative approach by installing state-of-the-art panels that harvest moisture from the atmosphere.
- Emissions resulting from water consumption: **0.02 tCO<sub>2</sub>e**.

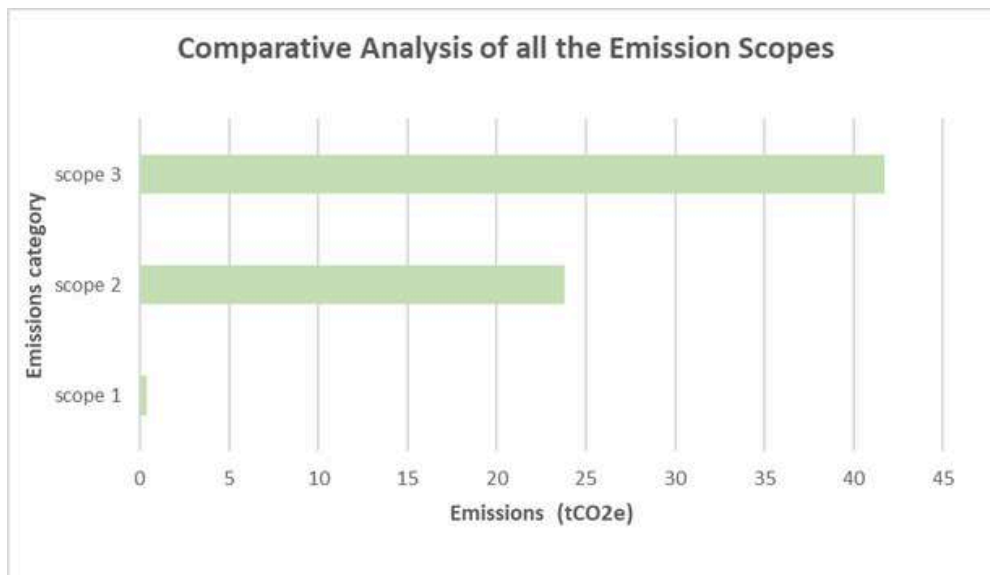
## 7.7 Indirect Emissions- Food Consumption (Scope 3)

Category	Emissions (tCO2e)
Vegetarian Meals	0.23466
Non-Vegetarian Meals	0.34312
Ingredients	0.21107
Desserts	0.87

- Total food-related emissions over the three-day event: **1.6 tCO2e**.
- This assessment involved the meticulous determination of emissions factors for various food items consumed, utilizing precise methodologies tailored to each item's characteristics and sourcing.
- By employing rigorous methodologies and adhering to industry best practices in emissions accounting, the reliability and credibility of the emissions data were upheld, enhancing the robustness of the assessment process.



# NETTZERO'S OBSERVATIONS



- The above chart provides a detailed summary of the emissions across the three scopes, illustrating their respective contributions to the event's carbon footprint.
- The total emissions for the entire BRIDGES by RARE event amount to **66 tCO2e**.
- Scope 3 emissions emerge as the highest contributor, totaling **41.74 tCO2e**.
  - Among Scope 3 emissions, travel emissions constitute the predominant factor.
    - Travel emissions represent a substantial portion, contributing to 96% of the Scope 3 emissions.
- Following Scope 3, Scope 2 emissions account for **23.80 tCO2e**.
- While relatively small, the inclusion of Scope 1 emissions at **0.36 tCO2e** was also accounted for.



## NETTZERO'S & INFERENCES

- **NettZero** believes that emissions associated with BRIDGES by RARE 2024 could have been capped at 50 tCO<sub>2</sub>e with strategic measures.
- A reduction of 7 tCO<sub>2</sub>e could have been achieved from electricity usage through efficiency improvements.
- Despite the presence of solar panels, the ones installed at The Roseate are inadequate to fully power the entire property, which spans 8 acres.
- To align with sustainability objectives effectively, it is imperative for renewable sources to cover 90% of The Roseate's energy needs, highlighting the necessity for comprehensive green energy integration.
- Both national and international travel emissions could have been significantly reduced by 4 tCO<sub>2</sub> each through strategic planning and implementation of sustainable measures.
- Employing a mix of hybrid activities, such as incorporating more virtual components alongside in-person events, could have effectively minimized the emissions associated with international travel while still maintaining engagement and participation.
- Sustainable travel options for national delegates, such as utilizing train services or promoting carpooling in electric vehicles, could have been introduced to curb emissions and encourage eco-friendly transportation choices.
- Given that travel and electricity accounted for the majority of emissions in event planning, prioritizing efforts to mitigate these emissions should be a top priority for future events.



## CARBON OFFSET & NEUTRALITY

To be added later

# ANNEXURE

## Emissions Adjustment as per DEED Form

The formula for calculating the percentage of delegate air travel emissions to be factored into BRIDGES by RARE for this event is as follows:

$$\text{Percentage \% to be factored} = (\text{Event duration} / \text{Total days of stay in India}) \times 100$$

This proportion is then used to adjust the emissions data for each delegate accordingly. Additionally, to estimate emissions for delegates with incomplete data, the median value of all collected emissions data from 9 filled DEED forms (sample size) is utilized, ensuring a comprehensive and equitable analysis. This decision was made due to the observed skewness in the data, ensuring a more accurate representation of emissions data.

## Emissions Adjustment- Local Delegates

Calculation of the estimated number of attending delegates with uncertainty factor:

$$\text{Estimated number of attending delegates} = \text{Total registered delegates} \times [100 \% - \text{Uncertainty factor} (\%)]$$

Calculation of total distance traveled by attending delegates:

$$\text{Total distance traveled} = \text{Median distance traveled per delegate} \times \text{Number of attending delegates}$$

The uncertainty factor, set at 20%, reflects the proportion of registered delegates who did not attend the event, accounting for potential fluctuations in attendance due to various factors such as scheduling conflicts or unforeseen circumstances.

Furthermore, the median distance traveled, determined from a sample size of 50 individuals, is recorded at 50 kilometers. Derived through direct inquiries to attendees, this statistical measure represents the midpoint of the dataset and offers a reliable estimate of the typical travel distance to the event venue.



# ABBREVIATIONS

1. kWh: Kilowatt-hour
2. tCO<sub>2</sub>: Metric tons of carbon dioxide
3. CO<sub>2</sub>: Carbon dioxide
4. GHG: Greenhouse gas
5. LPG: Liquefied petroleum gas
6. DG: Diesel generator
7. kWp: Kilowatt peak (a unit of power)
8. W: Watt
9. kgCO<sub>2</sub>e: Kilograms of carbon dioxide equivalent
10. m<sup>3</sup>: Cubic meter
11. km: Kilometer
12. tCO<sub>2</sub>e: Metric tons of carbon dioxide equivalent
13. DEED: Delegate Emissions Estimation Document



**Report Prepared by NettZero Environmental Advisory Technologies  
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