

## Carbon Footprint Overview

Working closely with 2041's very own Vanya, NativeEnergy was able to calculate the 2041 2009 expedition carbon footprint. Based on information you have provided us, we estimate that the total 2009 green house gas emissions resulting from Air/Marine Travel, and Accommodations, is **1072** Short tons of CO<sub>2</sub>.



### Attendee Offset Option:

2041 can provide its attendees with ability offset their expedition travel see the table below for carbon emissions by starting destination and pricing.

Origin	TON / TRAVELER	\$
ARGENTINA	7	\$ 140
AUSTRALIA	5	\$ 196
BELGIUM	7	\$ 231
CANADA	6	\$ 216
CHINA	10	\$ 261
INDIA	8	\$ 242
JAPAN	9	\$ 257
NETHERLANDS	8	\$ 232
PAKISTAN	8	\$ 243
SINGAPORE	8	\$ 235
SOUTH AFRICA	4	\$ 179
SPAIN	7	\$ 221
SWITZERLAND	7	\$ 229
UK	7	\$ 231
USA	6	\$ 210
USA/CHINA	16	\$ 356

**Air Travel Emissions:**

This calculation was based on the starting locations of the 2041 travelers. NativeEnergy used direct flights distance, and does not make assumptions for multiple legs trips. The 73 attendees flew a collective 1.2 million air miles from their homes to the start of 2041's expedition.

**Expedition Total Flight Emissions: 606 Short Tons CO<sub>2</sub>**

**Attendee:**

Origin	CO2 Tons	# Attendee	TON / Attendee
ARGENTINA	1.3	1	1.0
AUSTRALIA	5.3	1	5.0
BELGIUM	7.5	1	7.5
CANADA	19.3	3	6.4
CHINA	96.5	10	9.7
INDIA	8.3	1	8.3
JAPAN	9.4	1	9.4
NETHERLANDS	60.7	8	7.6
PAKISTAN	8.4	1	8.4
SINGAPORE	7.8	1	7.8
SOUTH AFRICA	3.8	1	3.8
SPAIN	6.8	1	6.8
SWITZERLAND	7.3	1	7.3
UK	180.0	24	7.5
USA	101.4	17	6.0
USA/CHINA	16.4	1	16.4
	<b>Grand Total Tons</b>	<b>Total Attendees</b>	<b>Avg Ton per Attendee</b>
	540.1	73	7.4

**Leaders:**

Origin	CO2 Tons	# Attendee	TONS / Leader
CHILE	1.3	1	1.3
NETHERLANDS	7.6	1	7.6
SOUTH AFRICA	3.8	1	3.8
UK	30.0	4	7.5
USA	23.4	4	5.9
	<b>Grand Total Tons</b>	<b>Total Leaders</b>	<b>Avg Ton per Leader</b>
	66.1	11	6.0

**Marine Travel Emissions:**

The emissions calculations for the sea component of 2041 expedition based on the information 2041 provided NativeEnergy the total emissions resulting from 2041 marine travel is 462 short tons.

**Expedition Total Marine Emissions: 462 Short Tons CO<sub>2</sub>**

**Attendee:**

Traveler	Tons	Total Tons CO <sub>2</sub>
73	5.5	401.5

**Leaders:**

Traveler	Tons	Total Tons CO <sub>2</sub>
11	5.5	60.5

**Accommodation Emissions:**

The calculations for accommodation are of total number hotel nights. Based on a estimation provided by the 2041 staff.

**Expedition:**

Total Travelers	Hotel Nights	Total Tons CO <sub>2</sub>
84	153	4

## Assumptions

### Air Travel Assumptions:

For USA-Based Travelers:

USA Trips were split up locations by 40% from West coast, 40% from East Coast, and 20% from Midwest.

### Data Sources:

Flight Distances Source: [www.webflyer.com](http://www.webflyer.com)

GHG Emission Factor: [www.ghgprotocol.org](http://www.ghgprotocol.org)