



## **Carbonfund.org's Event Calculator**

*Why did Carbonfund.org create an event calculator?*

We received many requests to offset events and conferences, so we thought the development of a calculator that is specific to this need was appropriate.

*What does it calculate?*

The event calculator considers all the factors normally associated with an event. These include: location, duration, number of attendees, venue, method of travel to and from the event, the distances traveled, hotel stays, and food. Other factors (group bus travel, for example) can be considered upon request.

*How is air travel calculated?*

Air travel is calculated based on the distance traveled. For the purposes of this calculator, a short haul flight is less than 300 miles, a medium haul flight is between 300 and 1,000 miles, and a long haul flight is greater than 1,000 miles. This is important because the most fuel usage (and therefore CO<sub>2</sub> emissions) takes place when the plane takes off, so a longer flight is more fuel efficient on a per passenger mile basis. The number of attendees flying and the distances flown are based on figures provided by the event planners. These calculations are based on work done by the World Resources Institute. To learn more, visit their GHG Protocol program online at [www.ghgprotocol.org](http://www.ghgprotocol.org).

*How is car travel calculated?*

Car emissions are based on the US average fuel economy. This information is available from the National Highway Traffic Safety Administration. The number of attendees driving and the distances driven are based on figures provided by the event planners. The conversion from fuel economy to CO<sub>2</sub> emissions is based on the number of gallons of gasoline used (a gallon of gasoline produces 8.87 kilograms of CO<sub>2</sub> – approximately 20 pounds – when burned (Source: Energy Information Administration)).

*How is train travel calculated?*

Train emissions are based on calculations done by the World Resources Institute. The number of attendees taking the train and the distance traveled are based on figures provided by the event planners.



### *How are venue emissions calculated?*

If the event planner can provide specific information regarding the venue, that information will be used. Otherwise, this will be based on information from the Department of Energy's 2003 Commercial Building Energy Consumption Survey (CBECS). This survey evaluates building energy usage based on the type and size of venue. Then, we couple this energy usage information with the local electricity emissions factors supplied by the Department of Energy to determine the total CO<sub>2</sub> emissions for the venue for the number of days that it will be used by the event. Visit the CBECS website to learn more: <http://www.eia.doe.gov/emeu/cbecs/contents.html>.

### *How are hotel emissions calculated?*

If the event planner can provide specific information regarding the venue, that information will be used. Otherwise, this will be based on information from the Environmental Protection Agency's study of hotel energy consumption. This study evaluated hotel energy usage based on the type of hotel (mid-grade, upscale, etc.). Then, we couple this energy usage information with the local electricity emissions factors supplied by the Department of Energy to determine the total CO<sub>2</sub> emissions for the hotel rooms that will be used by the attendees. You can view the EPA study at [http://www.epa.gov/CHP/project\\_resources/hotels.htm](http://www.epa.gov/CHP/project_resources/hotels.htm).

### *How are food emissions calculated?*

The food calculations are based on the kilograms of CO<sub>2</sub> produced daily by the average person's meat-based diet. This information comes from a recent survey done by *Wired* magazine; it is available at <http://www.wired.com/wired/archive/14.05/carbon.html>.

### *Why do you include an overage factor?*

We realize that no two events are ever quite alike, so we want to make sure that we are accounting for any emissions that have might have been missed by these calculations. This emissions factor will be based on feedback from the event planners; for an event with very detailed information about the event and its attendees, the overage factor will be lower and for events with less detail, the factor will be higher.