



Second Nature has calculated its carbon output for the year 2007. To do this we used The Climate Trust Carbon Calculator (attached). The Carbon Calculator breaks down carbon emissions produced by businesses into the three categories.

- 1) Infrastructure
- 2) Transportation
- 3) Shipping

To offset our carbon emissions we will be making a donation to the [Climate Trust](#) to fund offset projects. The Climate Trust has projects that are expected to offset nearly 2.6 million metric tons of carbon dioxide from \$8.8 million in investments. They are one of the largest and most experienced offset buyers in the U.S.

The breakdown of Second Nature's carbon output for the year 2007 is listed below.

Our Infrastructure emitted 2.9 metric tons of carbon dioxide

Second Nature's office located in Boston, MA is shared with another company in a suite. The total office space of the building is greater than 100,000 sq ft. Of that, Second Nature uses about 360 sq ft. Our electricity use was based on an estimation of the total building sq ft. divided by the *energy intensity figure* for our region. This # is then multiplied by 360 sq ft. our total office size, to provide the total # of kiloWatt hours (kWhs) used for the year.

The break down

$<100,000\text{sq.ft} = 105 \text{ billion kWhs} = 19.9 \text{ kWhs/sq.ft}$ (these figures provided by Energy Information Administration's 2003 Consumer Buildings Energy Consumption Survey)

Second Nature's office space is about 360 sq.ft

$360\text{sq.ft} \times 19.9 \text{ kWhs/sq.ft} = 7164 \text{ kWhs/sq.ft}$

The emissions factor for New England is estimated to be .908902 lbs CO₂/kWh

Second Nature used 7164 kWhs x .908902 emission factor = 6511 lbs CO₂ emitted

6511 divided by 2205 lbs in metric ton = **2.9 metric tons** of carbon produced from our electricity use.

Our Transportation emitted 54 metric tons of carbon dioxide

Second Nature's air travel was estimated to be 87,302 miles.

$87,302 \times 1.3068$ (the amount of CO₂/lbs produced for one air passenger mile) = 114,086 lbs of CO₂.

114,086 divided by 2205 = **52 metric tons** of carbon produced from our air travel

Second Nature's car travel was estimated to be 5,600 miles
5,600 divided by 25 (avg miles per gallon) = 224 gallons of gasoline used for the year
224 X 19.36 (the amount of lbs of CO2 emitted per one gallon of gas burned) = 4336 lbs of CO2 emitted
4336 divided by 2205 = **2 metric tons** of carbon produced from our car travel

Shipping

Our shipping is very little, so little that it is negligible. The majority of our work is transported electronically and thus is factored into our electricity use. But, those businesses that do use shipping, the calculator provides three means of transporting goods.

- air
- sea
- ground

Second Nature's operations for 2007 produced about **57 metric tons** of carbon dioxide. We will add 10% to this total to cover our estimation. Our donation will be based on **62.7** metric tons of carbon emitted.