Next, we perform a similar energetic calculation for food choices. Accounting for food exports, in 2002 the U.S. food production system produced 3774 kcal per person per day or 1.4×10^{15} BTU yr^{-1} nationwide (FAOSTAT 2005). (The difference between 3774 kcal per person per day and the needed average ~2100 kcal per person per day is due to overeating and food discarded after being fully processed and distributed.) In producing those 1.4×10^{15} BTU yr^{-1}, the system used 10.2×10^{15} BTU yr^{-1}. That is, given both types of inefficiency, food production energy efficiency is $100(1.4/10.2)\,(2100/3774) \approx 7.6\%$. Therefore, in order to ingest 2100 kcal day^{-1}, the average American uses $2100/0.076 \approx 72.6 \times 10^4$ kcal day^{-1} or

$$2100\frac{\text{kcal}}{\text{day}} \times \frac{1\ \text{BTU}}{0.252\ \text{kcal}} \times 365\frac{\text{day}}{\text{yr}} \times \frac{1}{0.076} \approx 4 \times 10^7\ \frac{\text{BTU}}{\text{yr}}. \quad (1)$$

In summary, while for personal transportation the average American uses 1.7×10^7 to 6.8×10^7 BTU yr^{-1}, for food the average American uses roughly 4×10^7 BTU yr^{-1}. Thus, there exists an order of magnitude parity in fossil energy consumption between dietary and personal transportation choices. This is relevant to climate because fossil fuel–based energy consumption is associated with CO_2 emissions.