

A Simple Carbon Calculator

For use by the Church

From the four quarterly bills for each of the following types of energy use, calculate the annual consumption in kWh. Use the multipliers to calculate the associated CO₂ emissions.

<u>Type of energy use</u>	<u>Annual consumption(kWh/yr)</u>	<u>Multiply by</u>	<u>Annual CO₂ emissions(kg/year)</u>
(1)Electricity		0.43	
(2)Gas		0.19	
(3)Oil		0.26	

For a 'typical' Sunday (of course there's no such thing, so you'll have to use both imagination and common sense) determine the total number of miles traveled to and from church by members of the congregation, in each of categories (4) to (7). Use the multipliers to calculate the associated CO₂ emissions.

- The gathering of information at this stage can be seen as a problem. It is better seen as an opportunity for raising awareness within the local church of the significance of climate change.
- You could work with the young people in your church to do a survey.
- You could hand slips to people as they arrive at church, and collect them back as they leave.
- You should do the same for church groups which meet on a weekly, monthly or other regular basis.
- Don't count people who travel as passengers in a car.
- Multiply the figures obtained by 52, 12 or as appropriate to determine the annual figure.

<u>Mode of travel</u>	<u>No. of miles</u>	<u>Multiply by</u>	<u>CO₂ emissions (kg)</u>	<u>Annual emissions (kg/year)</u>
(4)Car (petrol)		0.33		
(5)Car (diesel)		0.20		
(6)Train		0.10		
(7)Bus		0.05		

Add the amounts for each category from (1) to (7) to obtain a figure for your church's 'carbon footprint' in terms of CO₂ emissions (kg/year).

For use by individuals

Do your own calculations for categories (1) to (3) above. Divide each total by the number of people in your household.

Do your own calculations for the following categories.

<u>Mode of travel</u>	<u>No. of miles per year</u>	<u>Multiply by</u>	<u>Annual CO₂ emissions (kg/year)</u>
(4)Car (petrol)		0.33	
(5)Car (diesel)		0.20	
(6)Train		0.10	
(7)Bus		0.05	
(8)Air		0.20	

Add the amounts for each category from (1) to (8) to obtain a figure for your 'carbon footprint' in terms of CO₂ emissions (kg/year). Compare your figure with the average 'domestic' figure of about 5,500kg/yr. (The total figure for the UK, including industry etc, is 11,000kg/yr per head of population.) In order to restrict atmospheric CO₂ concentrations to about one-and-a-half times those of the pre-Industrial Age, we need to reduce our emissions by 80% by 2050. Thus, we should be working towards an average 'domestic' figure of 1,100kg/yr.