



Supplier Guidance Document

Energy and Fuel Use Data from Hertfordshire County Council Outsourced Services

Hertfordshire County Council
Version 1.1
March 2009

Contents	Page
1. <u>Background</u>	3
2. <u>Who we need Energy and Fuel data from</u>	4
3. <u>What this means for you</u>	4
4. <u>What Information we require</u>	4
5. <u>Gathering the Data</u>	6
6. <u>Accuracy and Quality of Data</u>	6
7. <u>Timescales</u>	7
8. <u>Support</u>	7
9. <u>Opportunities</u>	8
10. <u>In Future</u>	9
11. <u>What should you do now?</u>	9
12. <u>Next Steps</u>	9
<u>Description of and Guidance on the Spreadsheet Tool</u>	10

Note that some words and sentences are underlined in this document. In such instances they will either link to a website, another section in this document or the spreadsheet tool.

1. Background

- 1.1. In early 2008, the UK Government announced a new [performance indicator](#) set, three of which are related to the mitigation of unavoidable climate change. Local authorities must report on these indicators which aim to reduce carbon dioxide (CO₂) and other greenhouse gas emissions from the buildings and transport used to deliver local authority services.
- 1.2. Hertfordshire County Council (HCC) is committed to tackling climate change and to taking a lead in reducing CO₂ and greenhouse gas emissions from its operations and the Hertfordshire area, and will be reporting on all climate change related performance indicators.
- 1.3. As a result, we are required to annually report our CO₂ and other greenhouse gas emissions from the buildings and transport used to deliver our functions and services.
- 1.4. Measurement against these indicators will require HCC to collect data on the energy and fuel use in all HCC buildings and transport used to deliver services, *including where those services have been outsourced to another supplier. Therefore we are contacting our suppliers and requesting that they provide us with energy and fuel use information for those services that they provide on behalf of HCC.*
- 1.5. The energy and fuel data will be fed into a spreadsheet supplied by the Department for Energy and Climate Change (DECC) which will calculate CO₂, and other greenhouse gas emissions.
- 1.6. This information will be reported annually for the year 1 April to 31 March, with the first reporting year being 1 April 2008 to 31 March 2009. All local authorities will have to submit their year's data to DECC by the end of July of each reporting year.
- 1.7. Reporting on these indicators is **compulsory** for the county council; however it is also a welcome opportunity to recognise our existing, in progress and planned work to reduce CO₂ and other greenhouse gas emissions.

Opportunities for Suppliers

- 1.8. For suppliers that we outsource services to, this is an opportunity to assess current energy and fuel use, and may highlight areas where energy savings can be made. [Saving energy](#) is one of the easiest ways to reduce costs and may also improve company reputation, by helping to reduce the threat of climate change.
- 1.9. It may also help suppliers stay ahead of government regulation. With the introduction of the [UK Climate Change Act 2008](#) and its new tougher legally binding greenhouse gas reduction targets, in a few years

organisations from across all sectors may have little choice but to act to reduce greenhouse gas emissions that result from the consumption of energy. In addition, if the suppliers are large organisations they may be affected by the new legally binding emissions trading scheme called the [Carbon Reduction Commitment \(CRC\)](#).

- 1.10. **Therefore, gathering and monitoring energy and fuel use data now can help suppliers focus attention on where energy cost savings can be made and may enable the larger suppliers to prepare for the obligatory CRC when it is introduced in 2010.**

2. Who we need Energy and Fuel data from

- 2.1. We are responsible for the gathering and reporting of HCC energy and fuel data to DECC.
- 2.2. **As part of this, we need to gather all energy and fuel used by suppliers in delivering HCC services.** Note that we do not need to gather this information for goods procured by HCC, e.g. pens, tables, paper etc. We only require energy and fuel use from services provided by suppliers on behalf of HCC.
- 2.3. Due to the large amount of suppliers that HCC use to provide services, we have decided to only target those suppliers with which HCC spend in **excess of £1 million per annum or those suppliers that provide bus or taxi services for the county council.**

3. What this means for you

- 3.1. If you received a letter from us, then your organisation has been identified as a contract that we outsource some of our services to and that we spend in excess of £1 million per annum or provide bus and taxi services for the county council. .
- 3.2. As a result, we will be asking you to identify all the annual energy and fuel use from the buildings and transport your organisation has used in providing our services.

4. What Information we require

- 4.1. We require information on the annual energy and fuel used from the buildings and transport **used to deliver HCC services**. The data we require is listed on the next page.
- 4.2. If your organisation provides bus or taxi services for the county council then your organisation will only have to provide transport related data (see below).

- 4.3. We have adapted a [spreadsheet tool](#) provided by DECC for Local Authorities that will make recording this information as easy as possible for you. **You must use this tool when recording and reporting energy and fuel use to us.** A description of the spreadsheet tool and some guidance on how to use it is included at the [end of this note](#).

Buildings and Property Data Required

1. Organisation name and name of your building(s) or site(s)
2. Building Type
Description of building(s) that your organisation uses to deliver HCC services. Select from list – see Appendix I
3. Gross Internal Area (m²) of building
4. Energy type
(e.g. Electricity, Gas, Oil, Coal etc). Select from list - see Appendix II
5. Amount of fuel (kWh or litres) used to deliver our services
6. If the building has a boiler, then the boiler size (MW) or boiler type (e.g. gas turbine)

Transport Data Required

Note that the mileage and fuel used should only be from **fleet or business travel**. Employee commuting should **not** be included.

1. Site or Group
Organisation Name and brief outline of what transport is used for
2. Transport Type
(e.g. petrol or diesel car, rail, air, HGV etc)
Select from list – see Appendix III
3. Journey Type
(Fleet or Business Travel)
4. Distance travelled or fuel used
(km or litres)
5. Year of registration of vehicle

- 4.4. Note that we do **not** require energy and fuel data from capital projects or capital repairs to existing buildings.

- 4.5. However energy and fuel usage by suppliers providing maintenance or repairs to buildings/transport networks/vehicles that are used to deliver HCC services **should** be included.

5. Gathering the Data

- 5.1. Buildings energy data should be available from electricity and gas bills. If your organisation has an Energy Department/Manager, then they should be able to provide you with this information as well as any information about any other fuels used.
- 5.2. Gathering data about vehicle fleet movements and business travel may be available from;
- fuel purchase receipts
 - records of mileage travelled
 - expense claim systems
 - maintenance records
- 5.3. **There may be situations where the outsourced services cannot be attributed to HCC only, for example, the buildings and vehicles used to supply services for HCC may also be used by another local authority and/or private sector organisation. We will work with you to best decide how to attribute energy and fuel use. However, it is expected that energy and fuel use will be attributed based on floor area (m²) or the size of HCC's contract with your organisation and the percentage of income it provides to your organisation.**
- 5.4. The [Carbon Trust](#) is an excellent resource for help and tips on how to [save energy, how to monitor your energy use and understanding your energy consumption](#)

6. Accuracy and Quality of Data

- 6.1. All energy and fuel use data provided should be as accurate as possible. The data should be robust and be accurately measured for year on year performance.
- 6.2. Electronic or paper copies of all the data that you provide to HCC and any supporting documents should be retained by your organisation and copies issued to HCC, to ensure transparency and traceability.
- 6.3. The figures that we report may be audited by DECC/Government Office and if the emissions have shown to be unexpectedly high or low, then the source data and supporting documents may need to be checked to confirm the emissions.

7. Timescales

How often we will require this information:	Annually
Reporting Year:	1 April - 31 March
When we need this data by:	15 June of every year
First Reporting Period:	1 April 2008 - 31 March 2009

First Year of Reporting

For the first years reporting, energy and fuel data for the financial year 1 April 2008 to 31 March 2009 will be required to be sent to HCC by **15 June 2009**.

8. Support

- 8.1. We will aim to help as much as possible and provide support or answer any questions that you may have.
- 8.2. We have tried to make the recording of energy and fuel data as easy as possible for your organisation by providing a standard [spreadsheet](#) that you can fill in. We will also provide any help that your organisation may need in filling out the spreadsheet.
- 8.3. We will happily sign-post or point your organisation in the right direction to help or information that will aid monitoring and gathering energy and fuel data.
- 8.4. Unfortunately HCC will be unable to pay any fee or charge to your organisation for the work involved in gathering the energy and fuel data.
- 8.5. If you have any questions or require any help then you can contact us by email at energydata@hertsc.gov.uk

Useful Information and Links

[Defra-led national indicators](#)
[Defra guidance on National Indicator 185](#)
[Carbon Reduction Commitment](#)
[Carbon Trust](#)
[Energy Savings Trust](#)
[Climate Change Act](#)

9. Opportunities

- 9.1. Gathering and recording energy and fuel use data from delivering HCC services and from other functions your organisation performs **can focus your organisation's attention on energy use and may highlight areas where energy savings can be made.**
- 9.2. Reducing the amount of energy an organisation uses is one of the fastest, most effective ways to save the organisation money.
- 9.3. By identifying energy and emission savings it may help your organisation to combat climate change by reducing your carbon footprint. This may then improve your reputation as a socially responsible business and could help attract customers, employees and investors.
- 9.4. Finally, by monitoring and recording energy and fuel use, it may help your organisation stay ahead of government regulation. With the introduction of Climate Change Act 2008 at the end of November 2008 and climate change so high on the political agenda, we are likely to see more initiatives like the Climate Change Levy, the Emissions Trading Scheme, as well as tighter building regulations. In a few years, organisations from across all sectors may have little choice but to act to reduce greenhouse gas emissions that result from their consumption of energy.
- 9.5. In fact, if your organisation is large enough, then you may already be obliged to participate in the Carbon Reduction Commitment (CRC) when it is implemented in 2010. The data we are asking for from you may help to prepare for CRC. The CRC is an obligatory emissions trading scheme and from April 2010, participants will be required to submit annual energy data statements and buy carbon allowances to cover the emissions they generate. For more information consult:
<http://www.defra.gov.uk/environment/climatechange/uk/business/crc/index.htm>
- 9.6. For further information on saving energy and the benefits to business and the environment, including tips on how to save energy, the Carbon Trust is an excellent resource:
<http://www.carbontrust.co.uk/solutions>

10. In Future

- 10.1. **Important!** In future, Hertfordshire County Council will be inserting additional clauses in all of our contracts at the time of tendering or re-negotiation that will require suppliers that we outsource services to, to provide us with annual energy and fuel usage in providing our services.
- 10.2. We will also require suppliers to provide us with information on and evidence of energy efficiency, carbon dioxide and other greenhouse gas reduction activities that are planned, in operation, ongoing or completed for their organisation.

11. What should you do now?

- 11.1. You should assess if your organisation will be able to provide HCC with the data we are requesting in the time requested.
- 11.2. You should also send us an up to date contact name, address and email address for your organisation regarding gathering this data, for future correspondence.
- 11.3. Please email the above information to us by **27 March 2009**. Our email address for this is energydata@hertsc.gov.uk.
- 11.4. If you have any questions or queries, then please contact us. We will be happy to help.
- 11.5. Contact Details: energydata@hertsc.gov.uk

12. Next Steps

- Suppliers assess whether they can provide data to HCC **27 Mar 2009**
- Suppliers provide contact details to HCC **27 Mar 2009**
- Suppliers record data **Apr – Jun 2009**
- Suppliers send spreadsheet to HCC **By 15 Jun 2009**

Description of Spreadsheet Tool



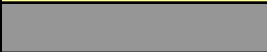

This section contains a brief description of the tool and how it works. The spreadsheet tool has been adapted from the spreadsheet provided to us by DECC (developed by AEA Energy & Environment)

The spreadsheet contains five worksheets; three information sheets and two data input sheets. The data input sheets are “**Input 1 – Properties**” and “**Input 2 – Transport**”.

Introduction Sheet

The **Introduction sheet** at the front of the workbook contains a very brief description of each of the worksheets, some important notes to take into account when using the spreadsheet and a description of the colour coding used in the spreadsheet. The cells are colour coded in the workbook to help you identify where you should enter data, where the tool has calculated something, and where the cell contains a constant (for example a conversion factor). This colour coding follows the best practice developed over several years for spreadsheets used in the UK National Atmospheric Emissions Inventory (NAEI). The figure below shows the colour codes used in this tool:

Figure 1: Colour Coding

Colour coding	
	Data input cell
	Automatically calculated - no data is required to be inputted in these cells
	Grey cells do not require any input. Some switch to blue when certain parameters are selected, and data can be entered.
	Emission or conversion factors

The introduction sheet also contains a QC box, listing the authors of the spreadsheet and records changes made during the evolution of the tool.

Input 1 – Properties

The first input sheet takes input energy and fuel data for all properties, as kWh fuel or electricity used. Where the user has data in other units, a conversion assistant is provided for common conversions. This Conversion Assistant is contained in a separate sheet within the workbook, called “**Conversion Assistant**”. If benchmark energy use data is available for a particular building type and fuel, the tool compares this with the fuel data entered, as a check to see if it is significantly above typical use. This is indicated by the cell changing colour from blue to red.

Input 2 – Transport

The second input sheet takes input data for all transportation sources, including the vehicle fleet and business travel. Data can be entered as vehicle or passenger km by mode of transport (e.g. small petrol car or short haul flight), or as the amount of fuel used. Ideally, vehicle km data is preferred; however typical fuel use per km is incorporated into the tool so that the calculation can be carried out using total fuel use data. Units are automatically

entered once the transport mode is selected, and a conversion assistant for miles to km is provided.

Both input sheets have a button at the top, which allows users to add a row to the base year data input table, so that more buildings and energy types and transport types can be added. This also adds rows to all of the tables for subsequent years, so that all of the formulas are copied down automatically to avoid introducing errors.

Factors, benchmarking & references

The “**Factors, benchmarking & references**” sheet contains all of the emission factors used in the input sheets, and is primarily for user information only. These data are separate to the data entry sheets to help make these sheets clearer, and to make the tool easier to update since all of the fixed data are held in the same place. All of the emission factors have been updated in line with the most recent version of Defra’s Guidelines for Company Reporting of Greenhouse Gases. References to the data sources are provided as links, where possible. Where it might be necessary to edit some of these figures or lists with local data, such as energy costs, a hyperlink is provided from the relevant section of the data entry sheet. The benchmark data for the various building types has been taken from the Carbon Trust tool.

Conversion Assistant

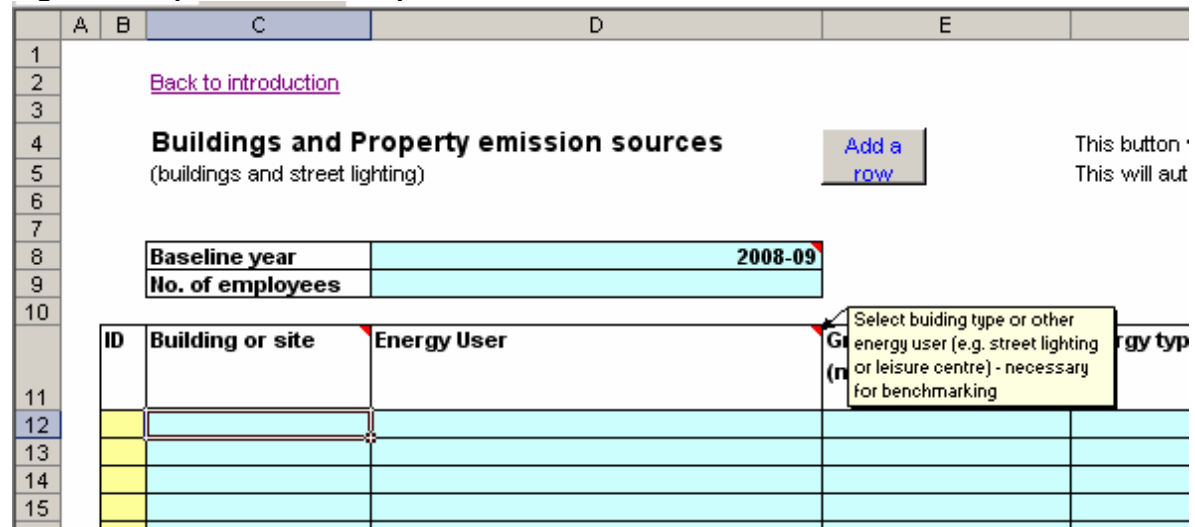
The “**Conversion Assistant**” sheet converts fuel data from tonnes or litres to kWh. These conversion factors have been updated based on the Gross Calorific Values taken from DUKES (2006). These values have been used rather than those from DUKES (2007), since the emission factors are based on the 2005 Greenhouse Gas Inventory (based on data taken from DUKES 2006).

General Guidance for Using the Spreadsheet Tool

Help with specific cells

If you see a cell with a red triangle ▼ in the top right hand corner, hover your mouse pointer over the cell for a few seconds and a box with a yellow background will appear containing more information; see the picture below for an example.

Figure 2: Help comments for specific cells



Documentation

Electronic or paper copies of all of the information (and supporting documents) you input into the tool should be retained to ensure transparency and traceability.

If you plan to overwrite any existing data in the tool, it is good practice to save a new version with a new name. This will allow you to go back to a previous version if mistakes are made or if the tool becomes corrupt.

Always ensure that you use a clear naming convention for different versions of the tool. This is particularly important if more than one person is using the tool at different times, so that only the most up to date version is updated.

Notes about the tool

This spreadsheet tool is **not** protected. This will mean that you are able to use cells outside of the main input tables for any extra calculations you might need, or to include further checksums. If you need to add rows, however, please do so only using the buttons provided, to ensure that all of the links and formulae continue to function as intended

Input 1 – Properties

Instructions and Required Inputs for the Spreadsheet

- Refer to **Figure 3 below**.
- In sheet “Input 1 – Properties, check the baseline year (cell D8) first – this should be 2008-09 (for the year 1 April 2008 to 31 March 2009).
- The number of employees can also be entered into cell D9, if you wish. This metric is not required for the indicator.
- The “ID” column is filled in automatically and provides a number for each building or site entered in the next column “Building or Site”. If a building uses more than one type of fuel (e.g. both electricity and gas), a separate row is required for each. The same ID number will be applied for each row referring to that particular building, provided they follow on from each other.
- The “Building or Site” column should contain your organisations name and the name of the building or site.
- The “Building Type or Energy User” column contains a list in a drop down box (see Appendix I for this list). If none of the options apply, select “other,” although no benchmark data are available for this option.
- The “Gross Internal Area” column is required for comparison with benchmark data.
- Select the “Energy type” from the drop down box in the next column (see Appendix II for this list).
- Enter the amount of each type of energy used in kWh. Where you have data in other units, a conversion assistant is provided (follow the blue hyperlink – for example see Cell G11).
- If you run out of data entry rows, click on one of the rows in the table (except for the first or last) and press the **Add a Row button**, which inserts a row above the one you have selected, duplicates this for the following years, and copies all of the relevant formulas.
- The tables for following years will all be automatically filled with most of the data, so that only the energy amounts need to be entered.
- You will also be required to select a boiler size or device type from the drop down list in column H. If this is unknown, a weighted average factor is available – but this will affect the accuracy of results. A device type does not need to be selected for electricity emissions.

Input 2 – Transport

Instructions and Required Inputs for the Spreadsheet

- Refer to **Figure 4 below**.
- The second input sheet for transport sources is very similar to the sheet for properties.
- The “Site or Group” column should contain your organisations name and brief but sensible description of what the emission relates to, such as the site where the employee is based, or a group of journeys, such as “meetings in London”.
- The “Transport Type” can be chosen from a drop down list (see Appendix III). Once this is selected, the “Unit’s” column will automatically update.
 - Note: If you select a transport type by fuel only without any reference to the type of transport, for example, ‘petrol’ or ‘diesel’ (as opposed to ‘large petrol car, above 2 litres’), then the “Units” column will update with ‘litres’ and the “Vehicle Type” column will automatically input ‘Petrol Unknown’. In addition the “Further Information (on Vehicle Type)” column will turn from grey to blue and you will be required to select an option from the drop down list.
 - Therefore if you only have fuel use for your mode of transport, then you will have to select a fuel only option from the list in the “Transport Type” column, i.e. ‘Petrol’ or ‘Diesel’ or ‘Compressed Natural Gas’, etc
 - It follows, that if you only have distance travelled for your mode of transport, then you will have to select a vehicle option from the list in the “Transport Type” column, i.e. ‘Small diesel car, up to 1.7litre or under’
- From the “Journey Type” column select either Fleet or Business from the drop down list.
- In the “Distance travelled or fuel used column”, input the number of kilometres (km) travelled or fuel used for that particular mode of transport. For journeys by road, activity data can be entered as the amount of fuel used (in which case, select a fuel type option from the list in the “Transport Type” column – see above comments), or the number of km travelled (for this, select a vehicle type option from the list in the “Transport Type” column – see above comments).
- For road vehicles only
- If you run out of data entry rows, click on one of the rows in the table (except for the first or last) and press the **Add a Row button**, which inserts a row above the one you have selected, duplicates this for the following years, and copies all of the relevant formulas.

Figure 3: Input 1 – Properties Worksheet

D17 fx

1	A	B	C	D	E	F	G	H	I
2			Back to introduction					Back to introduction	
3									
4			Buildings and Property emission sources						
5			(buildings and street lighting)						
6									
7									
8			Baseline year						
9			No. of employees						
10									
11			ID	Building or Site	Building Type or Energy User	Gross Internal Area (m²)	Energy type	Amount used (kWh)	Boiler size or device type (where applicable)
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30			2008-09 Total					-	
31									
32									
33									
34			Year						
35			No. of employees						

Add a row

This button will insert a row above the row in which you are currently working in the basei
This will automatically be duplicated in the subsequent tables

2009-10

Introduction | **Input 1 - Properties** | Input 2 - Transport | Factors benchmarking&references | Cor

Draw | AutoShapes | [Icons]

Appendix I – Buildings Type

Building Type List
Bollards & Signs (kWh)
Car Park - enclosed / multi storey
Car Park - open
Community Centre
Council - Care Homes
Council - Libraries
Council - Museums
Council - Special housing
Council - Town Halls
Day Centre
Depot
Housing
Housing - homeless
Housing streetlights (kWh)
Leisure Centre (Dry)
Leisure Centre (Lrg Pool)
Leisure Centre (Sml Pool)
Office - AirCon Prestige type4
Office - AirCon Standard type3
Office - No AirCon Cellular type1
Office - No AirCon OpenPlan type2
Other
School - Primary (no pool)
School - Secondary (no pool)
School - Secondary (with pool)
Streetlights (kWh)
Warehse - Light Large 8x5
Warehse - Light Small 8x5
Warehse - Medium Large 8x5
Warehse - Medium Small 8x5

Appendix II – Buildings and Property Energy Type

Energy type
Electricity (grid)
Electricity - CHP
Electricity (onsite renewables)
Natural gas
Gas oil
Burning oil
LPG
Wood
Coal

Appendix III - Transport Fuel or Vehicle Type

Fuel or vehicle type
Petrol
Diesel
Compressed Natural Gas
Liquid Petroleum gas
Electric Vehicles
Small petrol car, up to 1.4 litre engine
Medium petrol car, from 1.4 - 2.0 litres
Large petrol cars, above 2.0 litres
Average petrol car
Small diesel car, up to 1.7 litre or under
Medium diesel car, from 1.7 to 2.0 litre
Large diesel car, over 2.0 litre
Average diesel car
Medium petrol hybrid car
Large petrol hybrid car
Average car (unknown fuel)
Small diesel van ($\leq 1.25t$)
Medium/large diesel van ($>1.25 \leq 3.5t$)
Small petrol motorbike (mopeds/scooters up to 125cc)
Medium petrol motorbike (125-500cc)
Large petrol motorbike (over 500cc)
Average petrol motorbike (unknown engine size)
Bus
Rail - national rail
Rail - light rail
Rail - underground
Air - long haul international
Air - short haul international
Air - domestic
Walk
Cycle
HGV Rigid $>3.5-7.5t$
HGV Rigid $>7.5-17t$
HGV Rigid $>17t$
HGV All rigids UK average
HGV Articulated $>3.5-33t$
HGV Articulated $>33t$
HGV All artics UK average
HGV ALL HGVs UK average
Refuse trucks or road sweepers (rigid size)
Gardening and Grounds Maintenance - petrol
Gardening and Grounds Maintenance - Diesel
Industrial mobile machinery - Petrol
Industrial mobile machinery - gas oil

Background information used in compiling this information document

Guidance to local authorities and Government Offices on National Indicator 185: Percentage CO₂ reduction from local authority operations (Version 2), Department for Environment, Food and Rural Affairs, July 2008

<http://www.defra.gov.uk/environment/localgovindicators/documents/ni185-guidance-2008.pdf>

Guidance to local authorities and Government Offices on National Indicator 194: Air quality - % reduction in NO_x and primary PM₁₀ emissions through a local authority's estate and operations (Version 2), Department for Environment, Food and Rural Affairs, July 2008

<http://www.defra.gov.uk/environment/localgovindicators/documents/ni194-guidance-2008.pdf>

Analysis to Support Climate Change Indicators for Local Authorities. AEA Energy & Environment Report to Department for Environment, Food and Rural Affairs, 2007.