

Energy Toolkit (ET) – Other Building Tool Instructions

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1. Building Dashboard

The screen doubles up as a results summary page and users will be returned to the same screen after completing their data entry.

Energy Usage for Test Cathedral 01 in 2021

15% complete Not Submitted

1

Enter Data

Submit

Reset Data Entry

Other Building Details

Name	Test Cathedral 01
Category	Other Building
Diocese	Test Diocese
Town	Taunton
Post Code	
Notes	-

Results 2

Enter your data to see results for this Other Building.

Gross CO ₂ emissions (Tonnes)	-
Net CO ₂ emissions (Tonnes)	-
CO ₂ emissions (kg) per m ²	-
Person hours/year	-
CO ₂ emissions (kg) per person hour	-

- 1) Progress to date and the button which takes you into the data entry screen
- 2) Even before data entry has started a placeholder results section is shown so that this screen does not look too sparse.

2. Data Entry

- 1) You were asked upfront how many buildings you need to enter data for. This is to allow for cathedrals/TEIs/etc with multiple buildings which have separate energy meters and bills. It is possible to enter as many additional buildings as required.
- 2) Select all sources of energy used by the building. You can also give each building a name if you wish
- 3) It is possible to delete buildings if you have entered too many in (1)
- 4) It is also possible to add additional ones after the initial number of buildings has been set in (1).

Data Entry

Diocese Dashboard / Other Buildings List / Other Building Dashboard / Data Entry

Buildings & Fuels Used

Main cathedral building - Energy Usage
2 of 11 complete 18%

Main cathedral building - Building Size
0 of 2 complete 0%

Other building - Energy Usage
1 of 8 complete 13%

Other building - Building Size
0 of 2 complete 0%

Total
3 of 23 complete 13%

For how many buildings would you like to enter data? **1**

2

If you have multiple blocks/buildings with different readings for each

Building Name

Main cathedral building **2**

What sources of energy does this building use?

Electricity Gas Oil Alternative Solar Other No energy is used in this building

Delete this building **3**

Building Name

Other building

What sources of energy does this building use?

Electricity Gas Oil Alternative Solar Other No energy is used in this building

Delete this building

Next Add a building **4**

The next data entry page asks for details of your electricity and other heating fuel consumption:

Primary heating fuel	<input type="radio"/> Electricity 1 <input type="radio"/> Mains gas <small>The fuel that is mainly used to heat the building</small>
Electricity supplier	<input type="radio"/> Bulb <input type="radio"/> Ecotricity <input type="radio"/> Good Energy 2 <input type="radio"/> Green Energy <input type="radio"/> Green Journey/SSE <input type="radio"/> Octopus <input type="radio"/> Opus Energy <input type="radio"/> Other <input type="radio"/> People's Energy
Renewable tariff?	<input type="radio"/> Yes <input checked="" type="radio"/> No <small>Only fully renewable tariffs qualify. Enter as applies to your office.</small>
Electricity purchased (kWh)	3 <input type="text"/> <small>Enter total units for the year (kilowatt-hours) in this field, or total spend in the next field, or both. Include only electricity purchased from the grid, not generated on site.</small>
Cost of electricity (£)	4 <input type="text"/> <small>Enter total spend in the year in this field, and/or kWh in the previous field - only purchased electricity, not generated on site. For Parish Buying/Total, leave cost blank.</small>
Gas Supplier	<input type="radio"/> Crown Gas & Power <input type="radio"/> Green Energy UK <input type="radio"/> Green Journey/SSE 5 <input type="radio"/> None <input type="radio"/> Other
Renewable tariff?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Gas purchased	6 <input type="text"/> <small>If office has gas, enter total quantity for the year here, and/or cost below.</small>
Unit of gas purchased	<input type="radio"/> kWh <input type="radio"/> Cubic Metres 7 <input type="radio"/> 100s Cubic Feet <small>Enter unit used. Volume in 100s of cubic feet (old meters), cubic metres (new meters); or energy (kWh) calculated from volume on bills.</small>
Cost of gas (£)	8 <input type="text"/> <small>Quantity can be entered (above) and/or cost (here). Cost is total spend during the year.</small>
Does your tariff offset 100% of your energy?	<input type="radio"/> Yes 9 <input type="radio"/> No <input type="radio"/> Unsure

- 1) Select the primary heating fuel used by the building (i.e. the fuel that is predominantly used to heat the building)
- 2) The list of electricity suppliers shown here are those which have been verified as genuinely providing a 100% renewable electricity tariff. The list of companies meeting these criteria is reviewed each year and the criteria applied for inclusion can be found at the end of this document.

If a building uses a supplier not on this list, but which states it is either 100% renewable or fully offset, then they can tick “yes” when prompted by the “Renewable Tariff” section. In either case, the electricity used will not be automatically removed from their net carbon footprint but it will be shown in the results as having already been offset.

- 3) Enter the total kWh electricity usage from your electricity bill, ideally for dates covering as close as possible to the calendar year you are entering data for. You may need to add up several quarterly or monthly electricity bills in order to calculate this figure.
- 4) If you are unable to retrieve a kWh figure for your electricity use, then you can enter the building’s total spend on electricity into (4) instead. Doing so will allow the toolkit to estimate your carbon footprint based on average costs per unit of electricity.

Entering data into (4) is not strictly necessary if you have entered a kWh figure into (3) (as the kWh figure will be used to calculate your carbon footprint). However, entering data into both boxes will give us a better idea of average unit costs for building electricity use, and so will help us produce better estimates for buildings who are only able to enter a cost figure into (4)

- 5) The list of gas suppliers shown here are those which have been verified as genuinely providing renewable bio-gas. The list of companies meeting these criteria is reviewed each year and the criteria applied for inclusion can be found at the end of this document.

If a building uses a supplier not on this list, but which states it is either 100% renewable or fully offset, then they can tick “yes” when prompted by the “Renewable Tariff” section. In either case, the gas used will not be automatically removed from their net carbon footprint but it will be shown in the results as having already been offset.

- 6) Enter the total units of gas usage from your gas bill, ideally for dates covering as close as possible to the calendar year you are entering data for. You may need to add up several quarterly or monthly electricity bills in order to calculate this figure.
- 7) Select the type of units that you have been billed for on your gas bill (and used for the figure you have entered into (6)). This will usually be kWh, but some gas suppliers may bill you in cubic meters or 100s cubic feet.
- 8) If you are unable to retrieve a unit figure for your gas use, then you can enter the building’s total spend on gas into (8) instead. Doing so will allow the toolkit to estimate your carbon footprint based on average costs per unit of electricity.

Entering data into (8) is not strictly necessary if you have entered a kWh figure into (6) (as the unit figure will be used to calculate your carbon footprint). However, entering data into both boxes will give us a better idea of average unit costs for building gas use, and so will help us produce better estimates for buildings who are only able to enter a cost figure into (8)

- 9) This question is yes/no. You may also tick unsure if you are unsure.

The next data entry page asks for details of the building size and usage.

Building footprint (sq metres)

1

Average weekly visitors/number of people that use the building

2

** The following 3 questions are optional*

Were there any work-related travel expenses claimed in this year? *

- Yes
 No
 Unsure

3

Number of Miles *

Cost Claimed in £ *

Back

Next

- 1) Asks for the building footprint of the building you are entering data for. Please enter the figure in meters squared. A good estimate is fine – these numbers do not need to be 100% accurate, and long as they are in a right ball park.
- 2) Asks for the average number of people that make use of the building each week. Depending on the use of the building it might be best to think of “users” in terms of weekly visitors, or in terms of staff/students based in the building.

When trying to estimate and incorporate visitor attendance, this can be done two ways: You can either estimate the number of visitors you get in an average week or you can estimate how many visitors you get in a year and divide that number by 52. For example: - If you think you get around 20 visitors per week, use 20 in the box. - If you think you get around 800 visitors per year, use 15 in the box ($800/52 = 15$)

- 3) These questions relate to work related travel and are currently optional. Enter the number of car miles claimed and the total expense cost claim.

3. After Data Entry

Users are returned to the building dashboard screen with results populated immediately.

Energy Usage for Test Cathedral 01 in 2021

52% complete Not Submitted

Enter Data 1

Submit 2

Reset Data Entry 3

Other Building Details

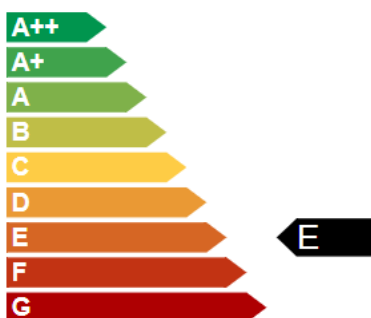
Name	Test Cathedral 01
Category	Other Building
Diocese	Test Diocese
Town	Taunton
Post Code	
Notes	-

4

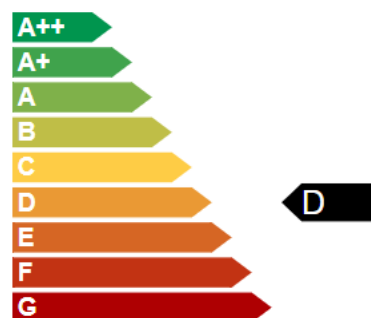
Results

Gross CO ₂ emissions (Tonnes)	28.0
Net CO ₂ emissions (Tonnes)	28.0
CO ₂ emissions (kg) per m ²	31.5
Person hours/year	16,848
CO ₂ emissions (kg) per person hour	1.664

Emissions per m² rating



Emissions per person hour rating



5

Show/Hide Results for Main cathedral building

Show/Hide Results for Other building

- 1) Takes you back to the data entry page so you can amend the data
- 2) Marks any data recorded against the building as final. This prevents other users from editing the data that you have entered for the building without first manually “unsubmitting” the data
- 3) Erases any user entered data against the building
- 4) Shows results for the building.
- 5) Allows you to view results for specific buildings if you have entered data for more than one

4. Importing/Exporting data in bulk

Dioceses with more than one “other building” may wish to import data in bulk by navigating to “Import/Export” data from the building list or the toolkit’s header navigation bar.

When clicking the general Import/Export link in the top menu users are first asked what type of building they’d like to import/export data for. Direct links to the category specific import / export screen exist in the Buildings List screen.

The screenshot shows a web interface for importing and exporting data. It is divided into two main sections: 'Export' and 'Import'.

- 1** Select a building category: A dropdown menu with 'Schools Import/Export' selected.
- 2** Select a year: A dropdown menu with '2021' selected.
- 3** Select a format for export: A dropdown menu with 'Excel (.xlsx)' selected.
- 4** Select data to include: A dropdown menu with 'All Records' selected.
- 5** Select type of field names: A dropdown menu with 'Database field names' selected.
- 6** Download Results to XLSX: A green button with a question mark icon.
- 7** Download XLSX Template for Import: A green button with a question mark icon.
- 8** Choose a file: A text input field with a 'Browse' button next to it.

The 'Import' section contains a light blue informational box: "In order to upload data we recommend first downloading a template file which will contain the correct column headings and building ids. You can use this as a basis to prepare your file for upload." Below this is a light yellow box: "If you are uploading a .xlsx file with multiple worksheets, ensure that the worksheet with the data you wish to upload is active when you save the file." At the bottom of the 'Import' section is a purple 'Submit' button.

- 1) Specify the type of building you wish to download/upload data for (schools, housing, offices etc)
- 2) Select the year that you wish to download data for
- 3) Select a file format to export the data to (either CSV or XLSX format). XLSX has the advantage of being able to include validation lists for fields which only accept specific values.
- 4) Choose whether to include records only for buildings for which data has been submitted or to include blank records.
- 5) Chose the type of field names you want your exported data to have.

Select human field names to use full labels in the header row for each field as they are displayed in the data entry form. In some cases this may make it easier to identify fields at the expense of a more verbose header row.

Select database field names to use short field names as used in the database.

This option does not apply if you download a template file in order to import data in bulk.

- 6) Downloads a file containing results suitable for further analysis in Excel. The file generated will contain read-only calculated fields and is unsuitable for importing data back into the system. If you need to import data download a template instead.
- 7) Downloads a template file in the correct format for uploading data to the system.

- 8) Upload a file to import data in bulk. For this process to work it is important that the CSV file have the correct headings so that the ET can correctly identify which fields each represents. Each row must also have an ID which uniquely identifies each building. It is therefore recommended that you download a template file and do not rename, add or remove any columns.

In some cases a variable might not be applicable to your building (e.g. oil_quantity for a building that is heated by gas). If this is the case then the variable should be left blank (please do not type “n/a” or similar)

Appendix 1: Green Energy Companies and the Energy Footprint Tool

The Energy Footprint Tool allows a church to easily calculate the carbon footprint of their energy use (oil, gas, electricity). It shows both their 'gross' and 'net' carbon footprint. The gross figure represents all the energy they have used, whilst the net figure deducts any electricity or gas which is either generated on-site or purchased from a 100% renewable tariff meeting certain criteria.

The list of companies meeting these criteria is reviewed each year. There is a degree of judgement involved, taking a balanced view across a range of factors, using only publicly available information. Where necessary and appropriate, a company or broker may be invited to attend for interview, at the Church Energy Advisors Network.

The criteria applied are:

- Whether a company's tariffs are all renewable, and if not how great a proportion is renewable;
- Whether they rely on offsetting;
- Whether units sold are the same as those supported by Renewable Energy Guarantees of Origin (REGOs);
- For electricity: Whether the company has its own generation and how much;
- For electricity: Whether purchase from other generators is direct;
- For gas: whether it is 100% bio-gas;
- Whether all is UK-generated;
- Whether the company is wholly or partly owned, or benefits from, investments by a fossil fuel major

None of these companies or tariffs are necessarily recommended to dioceses. Dioceses will want to take into account other factors such as ethical sourcing, cost and customer service. The list is solely to determine whether gas or electricity should be deemed to be net zero carbon in the Energy Toolkit's calculations.