

Energy Toolkit (ET) – Schools Tool Instructions

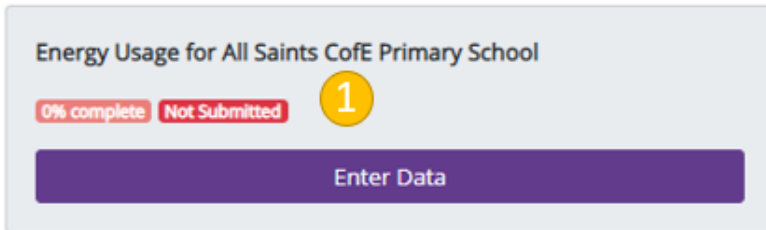
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1. Building Dashboard

This is the first screen that school users would see upon logging into the ET (if they have access to one school only) and leads into the data entry screen. Users with access to multiple schools (e.g. diocesan users) can navigate to a school’s building dashboard via the schools list.

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



Building Details

Building Name	All Saints CofE Primary School
Building Category	School
Diocese	London
Town	London

Results 2

Enter your data to see results for this building.

Gross CO2 emissions (Tonnes)	-
Net CO2 emissions (Tonnes)	-
CO2 emissions per m ²	-
Person hours/year	-
CO2 emissions 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 Screen

- 1) You were asked upfront how many buildings you need to enter data for. This is to allow for schools with multiple blocks which have separate DEC's or Energy Bills. It is possible to enter as many additional buildings as required.
- 2) There are two data entry tabs per building, one for energy usage and one for building details.
- 3) Users are asked whether they are entering data from DEC or utility bills. If utility bills are selected you will need to tick the boxes to indicate what sources of energy the building uses in order to present them you the relevant questions on the following screens.
- 4) It is possible to delete buildings if you have entered too many in (1)
- 5) It is also possible to add additional ones after the initial number of buildings has been set in (1).

The screenshot shows a data entry interface with a sidebar on the left and a main form area on the right. The sidebar, titled 'Buildings & Fuels Used', contains five items: 'Block A - Energy Usage' (2 of 11 complete 18%), 'Block A - Building Size' (0 of 4 complete 0%), 'Block A - Energy Usage' (2 of 11 complete 18%), 'Block A - Building Size' (0 of 4 complete 0%), and 'Total' (4 of 30 complete 13%). A yellow circle with the number '2' is next to the first 'Block A - Energy Usage' item. The main form area has a question 'For how many buildings would you like to enter data?' with a text input field containing '2' and a yellow circle with '1' next to it. Below this is a note: 'E.g. if your school contains multiple blocks with different readings for each'. The form then asks for 'Building Name' with a text input field containing 'Block A'. It then asks 'Are you entering data from a Display Energy Certificate or from utility bills?' with radio buttons for 'Display Energy Certificate' and 'Utility Bills', with a yellow circle with '3' next to 'Utility Bills'. The next question is 'What sources of energy does this building use?' with checkboxes for 'Electricity', 'Gas', 'Oil', 'Other', 'Alternative', and 'Solar', all of which are checked. Below this is a red button labeled 'Delete this building' with a yellow circle with '4' next to it. The form then repeats the 'Building Name' and 'Are you entering data from a Display Energy Certificate or from utility bills?' questions for 'Block B'. At the bottom, there are two buttons: 'Next' and 'Add a building', with a yellow circle with '5' next to 'Add a building'.

3. Entering data from a DEC

3.1 Retrieving a DEC

DECs for any public building can be retrieved from the webpage <https://www.gov.uk/find-energy-certificate>. From this webpage, select start now (1). On the next page select “A non-domestic property” (2).

Energy Toolkit x Find an energy certificate - GOV.UK x +

www.gov.uk/find-energy-certificate

Home / Housing and local services / Buying and renting a property

Find an energy certificate

Find an energy certificate for a property in England, Wales or Northern Ireland. This includes homes, business properties and public buildings.

This service is also available [in Welsh \(Cymraeg\)](#).

There's a different service to [find an energy certificate for properties in Scotland](#).

You can use this service to find an existing:

- energy performance certificate (EPC)
- display energy certificate (DEC) for a public building
- air conditioning inspection certificate and report

If your property does not have an energy certificate or it has expired, you can [get a new energy certificate](#).

You can search for a certificate by postcode, street name and town, or certificate number.

1 [Start now >](#)

On the next page select “A non-domestic property” (2).

Energy Toolkit x What type of property is the cert: x +

find-energy-certificate.service.gov.uk/find-a-certificate/type-of-property

GOV.UK Find an energy certificate

[Back](#)

What type of property is the certificate for?

A domestic property
For example a house or flat.

2 A non-domestic property
For example a commercial, industrial or public building.

[Continue](#)

On the next page, enter the postcode of the school you wish to retrieve the DEC for (3).

Energy Toolkit x Find energy certificates and reports x +

find-energy-certificate.service.gov.uk/find-a-non-domestic-certificate/search-by-postcode?lang=en&property_type=non_domestic

GOV.UK Find an energy certificate

[Back](#)

Find energy certificates and reports by postcode

Enter the postcode of the property

3 For example SW1A 2AA

Find

3.2 Entering data from a DEC

The information that you need to retrieve from the DEC and enter into the Toolkit are as follows:

- 1) The school’s main heating fuel
- 2) The DEC expiry date
- 3) The school’s annual energy use (kWh/m²/year) for electricity
- 4) The percentage of electricity from renewables
- 5) The school’s annual energy use (kWh/m²/year) for other fuels
- 6) The building’s floor area

The corresponding place on the first data entry page to enter each variable is shown below. The building’s floor area (6) is entered on the second entry data entry page (next page).

(7), (8) and (9) require information that is not recorded on the DEC, but may be known to the school to answer.

2 Valid until
31 May 2022

Certificate number
0060-8260-7119-7386-8570

Score	Operational rating	This building	Typical
0-25	A		
26-50	B		
51-75	C		
76-100	D		
101-125	E	106 E	100
126-150	F		
150+	G		

You can read [guidance on DEC and advisory reports for public buildings](#).

This building’s energy use

1 Main heating fuel Natural Gas

Building environment Heating and Natural Ventilation

Total useful floor area 6 6869 square metres

Asset rating Not applicable

Energy use Electricity Other fuels

Annual energy use (kWh/m²/year) 3 145.70 103.35 5

Typical energy use (kWh/m²/year) 122.55 165.81

Energy from renewables 0% 0%

- 1
 - Electricity
 - Mains gas
 - Oil
 - LPG
 - Pellets
 - Wood Chips

The fuel that is mainly used to heat the building

2
 No date selected

3

4

7

Is your electricity purchased through a local authority bulk procurement scheme?

Yes
 No
 Unsure

Annual energy use - Other Fuels (kWh/m²/year)

5

8

Is your main heating fuel purchased through a local authority bulk procurement scheme?

Yes
 No
 Unsure

9

Does your tariff offset 100% of your energy?

Yes
 No
 Unsure

Buildings & Fuels Used

Block A - Energy Usage
1 of 7 complete 14%

Block A - Building Size
1 of 2 complete 50%

Block B - Energy Usage
2 of 11 complete 18%

Block B - Building Size
1 of 2 complete 50%

Total
5 of 22 complete 23%

Primary heating fuel

DEC Expiry Date

Annual energy use - Electricity (kWh/m²/year)

Percentage of Electricity which is renewable

Annual energy use - Other Fuels (kWh/m²/year)

Buildings & Fuels Used	Total useful floor area (M2) 6
Block A - Energy Usage 7 of 7 complete 100%	<input type="text"/>
Block A - Building Size 1 of 2 complete 50%	Number of pupils 10
Block B - Energy Usage 2 of 11 complete 18%	<input type="text" value="190"/>
Block B - Building Size 1 of 2 complete 50%	According to our records your school has 190 pupils. We have divided this number equally between your 2 buildings and pre-populated this field but you may wish to adjust this figure.
	<input type="button" value="Back"/> <input type="button" value="Next"/>

The number of pupils in the school (10) has been pre-populated from government records available from <https://www.get-information-schools.service.gov.uk/>. If you believe this figure to be incorrect then you can amend it here.

4. Entering data from a utility bill

Primary heating fuel

1

- Electricity
- Mains gas

The fuel that is mainly used to heat the building

Electricity supplier

2

- Bulb
- Ecotricity
- Good Energy
- Green Energy
- Green Journey/SSE
- Octopus
- Opus Energy
- Other
- People's Energy

Renewable tariff?

- Yes
- No

Only fully renewable tariffs qualify. Enter as applies to your school.

Electricity purchased (kWh)

3

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.

Cost of electricity (£)

4

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.

Gas Supplier

5

- Crown Gas & Power
- Green Energy UK
- Green Journey/SSE
- Other
- None

Renewable tariff?

- Yes
- No

Gas purchased

6

If school has gas, enter total quantity for the year here, and/or cost below.

Unit of gas purchased

7

- kWh
- Cubic Metres
- 100s Cubic Feet

Enter unit used. Volume in 100s of cubic feet (old meters), cubic metres (new meters); or energy (kWh) calculated from volume on bills.

Cost of gas (£)

8

Quantity can be entered (above) and/or cost (here). Cost is total spend during the year.

Is your electricity purchased through a local authority bulk procurement scheme?

9

- Yes
- No
- Unsure

Is your main heating fuel purchased through a local authority bulk procurement scheme?

- Yes
- No
- Unsure

Does your tariff offset 100% of your energy?

- Yes
- No
- Unsure

- 1) Select the primary heating fuel used by the school (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 school 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 school’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 school electricity use, and so will help us produce better estimates for schools 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 school 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 school’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 school electricity use, and so will help us produce better estimates for schools who are only able to enter a cost figure into (8)

- 9) These questions are yes/no questions. You may also tick unsure if you are unsure.

On the following page you will be prompted to enter the buildings total floor area and number of pupils. The number of pupils in the school has been pre-populated from government records available from <https://www.get-information-schools.service.gov.uk/>. If you believe this figure to be incorrect then you can amend it.

5. After Data Entry

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

Energy Usage for Test School 05 in 2021

80% complete Not Submitted

1 Enter Data

2 Submit

3 Reset Data Entry

School Details

Name	Test School 05
Category	School
Diocese	Test Diocese
Town	Liverpool
Post Code	
Notes	-

4 Results

Gross CO2 emissions (Tonnes)	880.0
Net CO2 emissions (Tonnes)	880.0
CO2 emissions (kg) per m ²	67.3
Number of pupils	285
CO2 emissions (kg) per pupil	3,087.598

Emissions per m² rating

A++
A+
A
B
C
D
E
F
G

Emissions per pupil rating

A++
A+
A
B
C
D
E
F
G

5 Show/Hide Results for Block A

Show/Hide Results for Block B

- 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 total results for the whole school. If the school has more than one building the figures here will be the combined total for all the buildings in the school.
- 5) Shows/hides results for individual buildings if you have entered data for a school with multiple buildings

6. Importing/Exporting data in bulk

Users with access to more than one school are able 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** Import section: Contains a light blue informational box, a yellow tip box, a 'Choose a file' input field with a 'Browse' button, and a purple 'Submit' button.

- 1) Specify the type of building you wish to download/upload data for (schools, housing 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.

6.1 Using the Import template

To import data in bulk, the columns you will need to fill out on the template will differ depending on whether you are using data from a DEC or an energy bill.

The columns used for each data type are as follows:

If entering data from a DEC:

building_code (system generated)
 building (pre-populated)
 year
 building_number
 building_name
 dec_expiry_date
 primary_heating_fuel
 electricity_renewable_tariff
 dec_electricity_usage
 electricity_purchased_by_la
 dec_other_fuels_usage
 dec_percentage_renewable
 heating_fuel_purchased_by_la
 gas_renewable_tariff
 useable_floor_space
 building_occupancy

If entering data from an energy bill:

building_code (system generated)
 building (pre-populated)
 year
 building_number
 building_name
 electricity_supplier
 electricity_supplier_other
 electricity_renewable_tariff
 electricity_quantity
 electricity_cost
 electricity_purchased_by_la
 gas_supplier
 gas_supplier_other
 gas_renewable_tariff
 gas_quantity
 gas_unit
 gas_cost
 oil_quantity
 oil_cost
 other_fuel

other_fuel_quantity
other_fuel_unit
other_fuel_cost
alternative_heating
alternative_heating_other
solar_pv
solar_capacity
solar_generated
offsetting
offsetting_fuels
building_footprint
building_occupancy

In some cases the variable might not be applicable (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 schools. Schools 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.