Using CarbonBuzz

Browsing

The CarbonBuzz database can be browsed for free without the need for registering or logging in. Simple graphs showing design and operational energy performance for anonymous projects, as well as detailed information for published case studies, are accessible for guest users. Guest users will also be provided with a basic interactive platform where projects performance data can be sorted by industry sectors, benchmark categories and building energy performance.

Project set-up and records

Participating users and practices can register and start using CarbonBuzz for free at any time. Once logged on, each registered user will be directed to a custom landing page with a dashboard displaying their entered projects together with links to analysis, reporting, sharing and publishing, and their company home page. Users can add a new project by entering details of the building or site, or review and amend data for any existing current projects.
Dashboard displaying entered projects with links to analysis, reporting, sharing and publishing, as well as company home page.
For each project, users can add multiple records. Records are used to input annual energy data from a snapshot of the building in time and will contain data by fuel and by end use. Records can be entered at design stage, operational stage or anywhere in between. These could include design stage compliance results (Building Regulations Part L), energy use predictions, post construction stage calculation results, as-measured building energy data, or even just test records to get to know the CarbonBuzz tool.
New energy records can be added to each project under the ‘Project Details’ tab

**Data entry**

The data entry process can be either top-down or bottom-up, depending on user preference, with a minimum of total electrical and non-electrical energy use required. Nonetheless, users are encouraged to enter as much data as possible to facilitate more accurate and reliable investigation and benchmarking of energy performance. However, if not all the data is available, there will also be the option of editing data and adding further detail at any time.
Energy data for each record can be entered under the Energy Details tab. Building characteristics and usage information at each point within the project timeline, such as building fabric, building services, occupancy patterns and management programme, should also be included in the record where possible to enable better interpretation of energy use figures. Energy data in a record can also be split and entered as zones into CarbonBuzz, where the user has the available energy data for each building zone. A traffic light-style interface demonstrates to users whether their records have the minimum suggested level of data completeness. The completeness refers to the recommended amount of data and includes operational data and factors which contribute to energy consumption. By entering complete project records, the user can begin to understand and close the performance gap.
Building characteristics and usage information can be entered under the ‘Contributing Factors’ tab to enable better interpretation of energy use figures.

Analysis
CarbonBuzz allows users to analyse and compare data entered for their buildings at each project stage through energy and carbon graphs known as Energy Bars. This simple to use interface is displayed as part of the list of records within each project, and shows a breakdown of annual energy use for each record according to fuel type or by end use. Data on the energy bars can then be displayed in carbon units (tonnes of CO₂ per year), fuel units (kWh per year) and by total floor area or per unit area.
Energy bars showing breakdowns of energy use according to fuel type or by end use to allow comparison between each project stage

This function allows users to quickly compare their data in a multitude of combinations, such as design data with as-built or as-measured data, in order to determine any potential energy performance gaps, and identify issues associated with the compliance procedure and assumptions made at design stage. The energy bars function will also facilitate the user in determining specific records that are representative of design and measured stages for benchmarking the project.

**Benchmarking**

The data entered by all participating practices will contribute to an audited database of forecasted and actual energy use from a range of anonymous and published projects. The database will subsequently be fed back to the users’ platforms to allow benchmarking of their projects against similar buildings from design stage through to operation stage.

Users will have the option to carry out the benchmarking analysis by industry sectors, benchmark categories and by using various filters for building and project characteristics. Through comparison with data from similar projects, users will be able to check completeness of their energy estimates and log their assumptions, as
well as differentiate between sources of annualised data. More detailed analysis can be undertaken with published portfolios.

An audited database of energy use data feeds into the ‘Analysis’ tool which allows benchmarking analysis against similar buildings from design stage through to operational stage.

**Tracking**

Users can track, review and compare energy records and contributing factors over time using the ‘Tracking Changes’ function. By logging contribution factors for each record, users will be able to keep track on the end uses that contribute to performance changes over various project design, construction and operation stages. This will facilitate reporting improvements and quantify any performance enhancement resulting from investment in energy efficiency measures. Relevant documents for the various stages can also be uploaded onto the CarbonBuzz ‘Documents’ platform for sharing between organisations and for future references.
The 'Tracking Changes' functions enable users to track, review and compare energy records and contributing factors over time.

**Report**
The reporting function displays energy use and carbon emission data at key project stages (such as design data only, actual data only or design and actual data) to help participating practices target operational energy use and performance gaps. Data for projects can be sorted according to completion date, energy and CO₂ performance, magnitude of performance gaps and various other assumptions to highlight and showcase excellence. It provides a feedback to industry and policy-makers on whether energy efficiency incentives have been well targeted, and for investors on whether investment has delivered the expected improvements.

The reporting outputs also encourage tracking of direct and indirect CO₂ emissions to support organisational environmental management systems and promote the use of Building Performance Evaluation for improving future building design and operational management practices. Users can continue to add projects and records to develop a wider portfolio and to increase the amount of data available for analysis.

**Sharing and Publishing Projects**
Any data that could identify a project will remain private by default and cannot be attributed to individual projects or practices unless specified by the user.

However, users can choose to share their CarbonBuzz projects, records or portfolios with specified users and organisations to facilitate design and operation (such as with Local Authorities to assist planning application, project consultants during design, or with facilities managers for a landlord). This sharing facility provides a useful information platform that links the capital expenditure and operational expenditure teams of projects. It also facilitates the integration of design and
operation energy quantification, supporting Building Performance Evaluation and Soft Landings efforts.

Users will also have the option to publish building performance data for their projects and data sets on a ‘full disclosure’ basis through CarbonBuzz to gain the RIBA Carbon Conscious Practice accreditation. The publishing feature allows users to showcase their building performance, but CarbonBuzz also encourages the publishing of projects that do not perform as well as planned, as they often provide invaluable learning lessons for the building design community.

![Publish building performance data on a full disclosure basis through the ‘Sharing and Publishing’ feature](image)

**Chargeable functions**
CarbonBuzz and its founding partners are committed to providing a non-profit service with the goal of closing the energy performance gap of buildings. As such, the energy tracking and benchmarking functions of the platform are and will continue to be available to all users for free in the future.

Additionally, CarbonBuzz will offer more advanced features that will be chargeable, so that the platform is financially self-sustainable. By registering for the advanced features, users will be able to export and download the CarbonBuzz database in Excel format, filter the database for detailed analysis and benchmarking, produce more than 3 reports for their projects and generate detailed comparisons of different tracking changes. Users with detailed energy data will also be able to input information for different zones within a building to enable more in-depth and comprehensive energy performance analysis and benchmarking.
Users will be able to export and download the CarbonBuzz database by registering for the advanced features.