cotswoldenergy group

Carbon Report

FY2023-2024

1 Document Control

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1.2 Revision History and Quality Assurance

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2 Executive Summary

Cotswold Energy Group Ltd (CEG) is a leading installer in the energy efficiency and renewable technology sector, providing solar PV, battery systems, heat pumps, boilers, and related services across commercial and domestic markets in the UK. This Carbon Report establishes CEG's baseline greenhouse gas (GHG) emissions for the financial year 2023–2024 and defines the pathway to achieving Net Zero emissions in line with the wider Group strategy.

The Organisational Scope and Emissions Scope have been defined, and the report is structured according to the GHG Protocol Corporate Reporting Standard and also demonstrates compliance with PPN 06/21 and ISO 14064-1.

During the selected Base Year of 1st April 2023 – 31st March 2024, carbon emissions for the year were **10,657 tCO_2e**.

Scope 1 (direct) emissions accounted for 360.3 tCO_2e, mainly from fuel combustion in company vehicles, as well as minor fugitive emissions from refrigerants and warehouse equipment. Scope 2 (indirect, from purchased electricity) totalled 31.4 tCO_2e, primarily associated with electricity use at the office building (1 Upper Mills). The vast majority of CEG's carbon footprint resides in Scope 3 (other indirect emissions), which contributed over 96% of total emissions (10,265 tCO_2e). Notably, Upstream Transportation and Distribution was the single largest emissions source (~87% of Scope 3, 8972 tCO_2e), followed by Purchased Goods and Services (~9% of Scope 3, 962 tCO_2e).

The analysis identifies clear emission hotspots, with ~96% of Scope 3 emissions attributable to inbound freight and procurement. Fleet vehicles (Scope 1) also represent a key area for targeted reduction. Data quality was high for direct fuel and electricity use (Scope 1 and 2) but lower for most Scope 3 categories reliant on spend- or estimate-based calculations, highlighting areas for future data improvement and supplier engagement.

CEG has adopted science-aligned targets to achieve **Net Zero emissions for Scope 1 and 2 by 2035**, and for **Scope 3 by 2040**. Any remaining emissions (less than 10% of baseline) will require permanent carbon removals to fully achieve Net Zero, beginning from 2040.

This Carbon Report provides a transparent baseline for monitoring progress and guides targeted actions for decarbonisation. Annual reviews will ensure targets remain robust, with ongoing improvements in data collection and management practices supporting continuous enhancement of emissions reporting accuracy.

3 Introduction

3.1 Reporting Standards and Frameworks

This report has been prepared in accordance with the following:

- GHG Protocol Corporate Standard (main body)
- PPN 06/21 (Appendix C)
- ISO 14064:2018 (Appendix B)

3.2 Organisational Scope

Cotswold Energy Group Ltd. (CEG) supply and install energy efficiency and renewable energy solutions, including Solar PV, Battery systems, Electric Storage Heaters, Air- and Ground Source Heat Pumps and Boilers to commercial and domestic properties including private homes, councils, leisure facilities, estates, museums, schools, and police stations.

CEG is a privately owned subsidiary within a Corporate Group and operate from 3 main sites in the UK: 1 rented office building in Stonehouse (1 Upper Mills), 1 rented office space in Stonehouse (1 floor of The Mill) and a Warehouse Unit in Gloucester. Alongside the sites, CEG operate a large fleet of commercial vehicles.

Using the Operational Control approach, this report accounts for all greenhouse gas (GHG) emissions from operations where the company has full authority to introduce and implement policies; including the rented office spaces and warehouse facility, fleet of vehicles and any emissions generated during installation and maintenance, as well as the use of tools, machinery and any other equipment that is fully controlled by the company.

In addition, to comply with PPN 06/21 requirements, the report includes reporting of specified Scope 3 categories that fall outside of direct operational control.

The report does not account for outsourced or contracted work, emissions from customer premises associated with the installation, investments and joint ventures or any other operations in which is has interest but not full control.

3.3 Emissions Scope

Emissions arising from activities of CEG, and throughout the supply chain, are grouped into three scopes in accordance with the Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard [1] as follows:

Scope 1 – Direct GHG emissions occur from sources that are owned or controlled by the company.

Scope 2 – GHG emissions from the generation of purchased electricity consumed by the company.

Scope 3 – Other indirect emissions consequential of company activity but occur from sources not owned or controlled by the company.

[1] https://ghgprotocol.org/corporate-standard

3.3.1 Included Emissions Categories

Table 1 outlines the emissions that have been included within the scope of the Cotswold Energy Insulation Services Ltd Carbon Reduction Strategy.

Table 1: Scope 3 Categories Included in Reporting Boundary

Emissions Category	Activities included
Scope 1 – Direct Emissions	
Fuels	All fuel combustion that occurs on site-specific premises. All fuel used for vehicles owned or leased by Cotswold Energy Group. (e.g. fleet and machinery / forklifts in the warehouse).
Fugitive Emissions	Site-specific fugitive emissions (e.g. air conditioning or refrigerant leakage) in the office building (1 Upper Mills), where CEG has control of the maintenance.
Scope 2 – Indirect Emissions	
Purchased Electricity	Electricity usage in buildings and at sites operated by Cotswold Energy Group. Including only one office site (1 Upper Mills) and the warehouse. The rented office space (The Mill) is included in category 8 as reporting company has limited operational control.
Scope 3 – Other Indirect Emissions	
1. Purchased goods and services	Production of goods and services purchased or acquired by the company from tier 1 suppliers in the reporting year, not otherwise included in scope 3 categories 2 - 8
2. Capital Goods	Emissions from the extraction, production and transportation of capital goods purchased or acquired by the reporting company in the reporting year.
3. Fuel and energy related activities (not included in Scope 1 or 2)	Upstream Well-To-Tank (WTT) emissions (extraction, production and transportation) and transmission and distribution (T&D) losses related to fuels and energy (electricity) purchased and consumed by the reporting company in the reporting year that are no included in scope 1 or scope 2.
4. Upstream transportation and distribution	Scope 1 & 2 emissions of transportation and distribution of products purchased by the reporting company in the reporting year between a company's tier 1 suppliers and its own operations (in vehicles and facilities not owned or controlled by the reporting company). Not including the life cycle emissions associated with manufacturing or vehicles.
5. Waste generated in operations	Third-party disposal and treatment of waste generated in the reporting company's owned or controlled operations in the reporting year (in facilities not owned or controlled by the reporting company). Distance travelled by waste transport vehicles is included.
6. Business Travel	Transportation of employees for business-related activities during the reporting year (in vehicles not owned or operated by the reporting company).
7. Employee Commuting	Transportation of employees between their homes and place of work during the reporting year (in vehicles not owned or operated by the reporting company) and Emissions from employee teleworking.
8. Upstream leased assets	Operations of assets leased (rented office space, The Mill) by the reporting company (lessee) in the reporting year not included in scope 1 and scope 2.

3.3.2 Excluded Emissions Categories

Cotswold Energy have excluded some Scope 3 emissions categories, as shown in table X below, alongside the reasoning.

Table 2: Scope 3 Categories Excluded from Reporting Boundary

Scope 3 – Other Indirect Emissions	Activities excluded	Reason for exclusion
9. Downstream transportation and distribution	Transportation and distribution of products sold by the reporting company between the reporting company's operations and the end consumer (if not paid for by the reporting company).	All downstream transportation and distribution occur in company owned vehicles and is therefore accounted for in scope 1 emissions.
10. Processing of sold products	Processing of intermediate products sold by the reporting company by third parties.	No processing of sold products.
11. Use of sold products	Use of goods and services sold by the reporting company.	Not required for compliance with PPN 06/21.
12. End-of-life treatment of sold products	Waste disposal and treatment of products sold by the reporting company at the end of their life.	Not required for compliance with PPN 06/21.
13. Downstream leased assets	Emissions from the operation of assets owned by the reporting company and leased to other entities.	Not applicable as no leased assets.
14. Franchises	Operation of franchises, i.e., businesses operating under the brand name of the reporting company, which are not included in Scope 1 or Scope 2.	Not applicable as no franchises
15. Investments	Emissions associated with the reporting company's investments in other companies or projects.	Not applicable as no investments

3.4 Base Year

The base year for this carbon audit is the financial year 2023–2024 (1st April 2023 – 31st March 2024). This selection ensures data is recent, relevant, and aligned with our financial reporting cycle, enabling effective tracking of future emissions reductions.

3.5 Data collection and methodology

Emissions are calculated using a combination of:

- Activity-based methods (e.g. fuel consumption, distance travelled),
- Spend-based methods (where activity data is unavailable), and
- Hybrid methods (where a combination provides improved accuracy).

Full breakdown of methodology per scope and emissions categories and assumptions, where applicable, is provided in

All emissions from activities described in Table 1 have been analysed for Cotswold Energy Group, enabling carbon emissions to be calculated for the baseline year, defined as 1st April 2023 – 31st March 2024.

This analysis also enabled the Organisational Scope to be validated ensuring any additional areas identified as part of the data collections process have been included within the boundary.

> Total carbon emissions for Cotswold Energy Group during the Baseline Year were **10,657 tCO_2e**.

To ensure fair year-on-year comparisons, and allow tracking of significant changes of the organisations carbon emissions, there may be a need to re-baseline based on the following reasons due to either a) structural changes (acquiring or selling a business within the group), b) Outsourcing / insourcing (moving a core activity from in-house (scope 1) to a contractor (scope 3), c) Methodology changed (getting better data for a major emissions source) or d) Discovery of errors (finding a significant error in the original data). Organic changes to the business will not be cause for re-baselining as the carbon footprint shouldn't reflect size of organisation.

For CEG, the recommendations is to set a >5% significance threshold, meaning only major changes will result in a recalculation and is line with best practice.

4.1 Emissions Breakdown

Figure 1 provides a breakdown of total baseline emissions.

The sections that follow provide detailed breakdowns and comparisons within each scope category where contribution was material (>1% of total emissions) and/or are subject to regulatory compliance.

A full breakdown of all emissions by source is provided in Appendix D.

4.2 Scope 1 Emissions

The total Scope 1 emissions for the reporting year were 360.25 tCO_2e, arising from fuel combustion in fleet vehicles, LPG use for warehouse equipment, and fugitive emissions from air conditioning systems at the office building (1 Upper Mills).

Diesel fleet vehicles accounted for over 99% of total Scope 1 emissions, with the Ford Transit Customs alone responsible for 60% (216.7 tCO_2e). See Table 3 below for breakdown of vehicle types and associated emissions.

Scope 1 emissions were calculated using the activity-based methods, drawn from high-quality data.

Figure 2: Scope 1 Emissions by Fuel Type (tCO_2e) (Diesel, Petrol, LPG, Refrigerants)

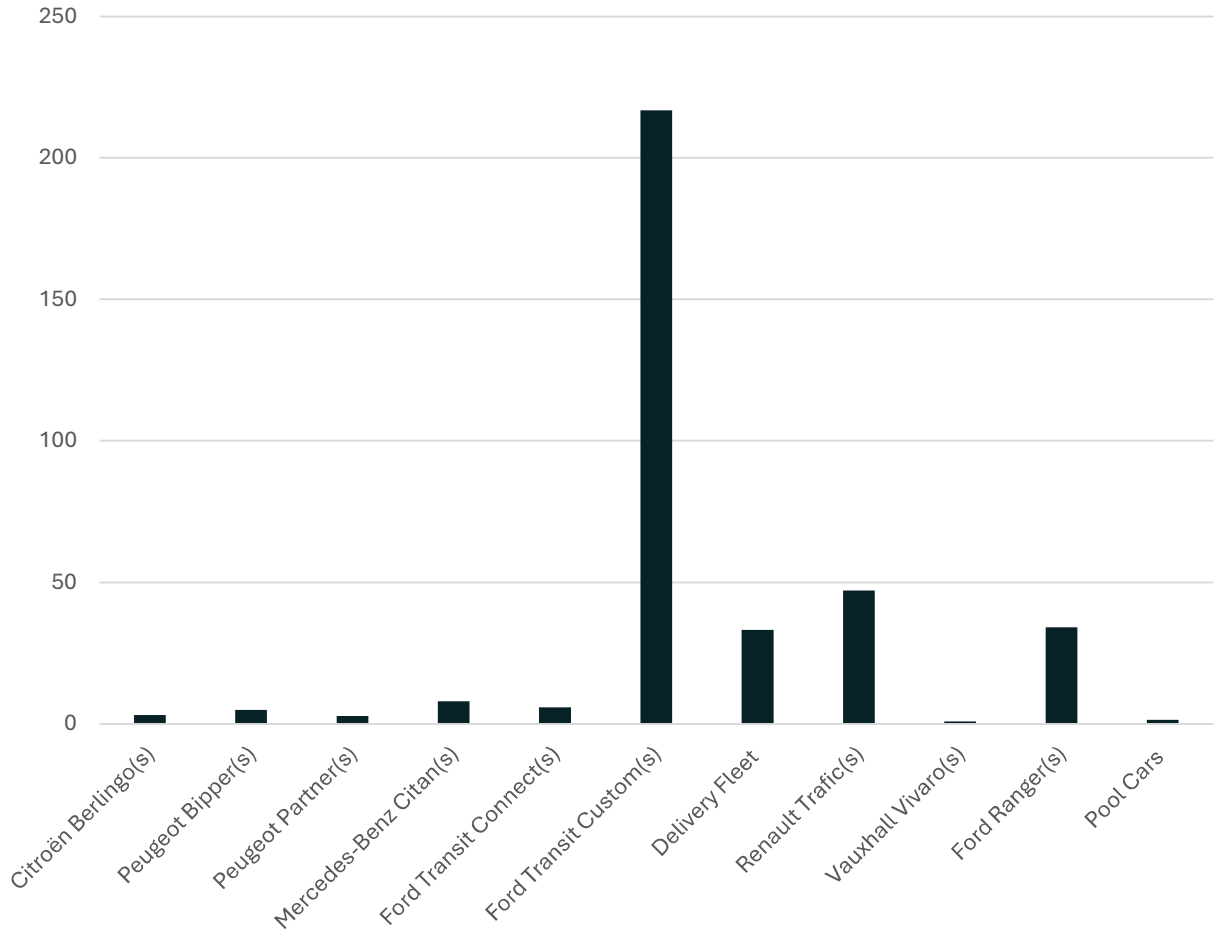


Figure 3: Scope 1 Vehicle Emissions by Vehicle Type (tCO_2e)

4.3 Scope 2 Emissions

The total Scope 2 emissions for the reporting year were 31.4 tCO_2e under the market-based method. The majority of these emissions (86%) originated from electricity use at the company's rented office building (1 Upper Mills), where 128,560 kWh were consumed in the reporting year.

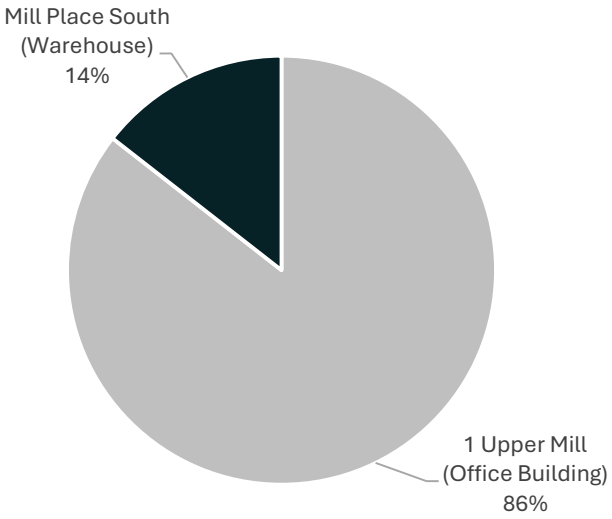


Figure 4: Scope 2 Emissions by Site (tCO_2e) – Market-Based

British Gas provided a market-based emissions factor directly on the energy bills for 1 Upper Mill. As the supplier claims to source the majority of its electricity from renewable energy, market-based emissions for this site were significantly lower at 6.4 tCO_2e, compared to 31.4 tCO_2e under the location-based method; approximately a 80% reduction when using supplier-specific factors instead of national grid averages. This difference is visualised in Figure 5 below.

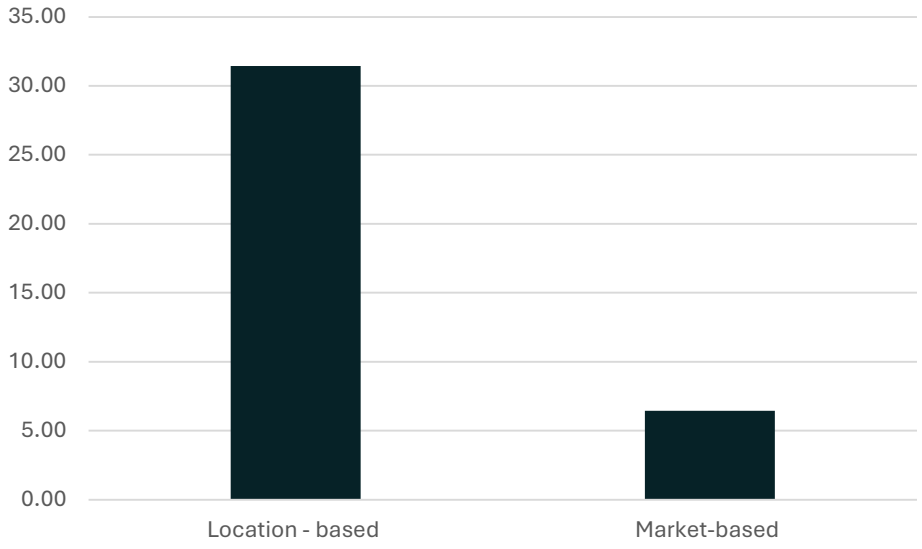


Figure 5: Scope 2 Emissions (tCO_2e) by Method – Market-Based vs Location-Based

4.4 Scope 3 Emissions

Scope 3 emissions accounted for the vast majority of the company's total carbon footprint in the baseline year, totalling 10,657 tCO_2e. The largest contributor was Upstream Transport & Distribution (~87% of Scope 3), followed by Purchased Goods and Services (~9%). Other relevant categories included Leased Assets, Fuel & Energy-Related Activities, Business Travel, Employee Commuting, and Waste, each contributing between 0% and 1% of total Scope 3 emissions.

Figure 6 provides a visual breakdown of Scope 3 emissions by reporting category. Detailed analysis of each category is provided in the sections that follow.

Figure 6: Scope 3 Emissions by Category (tCO_2e), Baseline Year

As discussed in 4.1, some Scope 3 categories are not included in the detailed breakdown to follow as they are immaterial (<1% contribution to emissions and not subject to regulatory compliant. This includes Capital Goods (3.2), Fuel- and Energy-related activities (3.3) and Leased Assets (3.8).

4.4.1 Purchased Goods and Services

Total emissions for Scope 3.1 (Purchased Goods and Services) were 962 tCO_2e, based on a total procurement spend of £7.12 million. Emissions were calculated using a spend-based method, applying industry-average emissions factors by sector. As spend-based methods are less precise than activity-based approaches, data quality is considered low for this category.

Emissions were concentrated in two main categories: installation materials (431 tCO_2e,) and subcontractor services (391 tCO_2e), together accounting for 85% of Scope 3.1 emissions (see Figure 7).

Figure 7: Scope 3.1 Emissions by Goods and Services Type (tCO_2e)

Figure 8 presents a comparison of emissions and procurement spend by goods and service type. While installation materials had the highest emissions and spend overall, subcontractors and ancillary services showed a notably high emissions intensity relative to spend, indicating a potentially high-carbon supply area worth further review.

Figure 8: Scope 3.1 Emissions and Spend by Goods and Services Type (tCO_2e and £ Million)

4.4.3 Upstream transportation and distribution

Total emissions for Scope 3.4 (Upstream Transport and Distribution) were 8972 tCO_2e, making this by far the largest contributor to Scope 3 emissions (~87% of total Scope 3, and ~85% of total company emissions).The vast majority of this scope (~93%) were attributed to inbound deliveries of solar PV equipment (8583 tCO_2e), mainly from Midsummer Energy (8580 tCO_2e).

Other categories contributed comparatively small amounts, including HVAC supplies (292 tCO_2e, ~3%), office supplies (53 tCO_2e, <1%), electrical supplies (35 tCO_2e, <1%) and general building supplies (9 tCO_2e, <1%).

The data quality for this category is very low and a lot of assumptions have been used – see Appendix A for further details.

Figure 9: Scope 3.4 Emissions by category (tCO_2e)

4.4.4 Waste generated in operations

Scope 3.5 (waste generated in operations) totalled 48 tCO_2e. Landfilled commercial and industrial waste accounted for 99% of all emissions from waste processing (23 tCO_2e), Recycled materials represented the majority of waste by weight (44.9 tonnes of landfilled waste compared to 87.9 tonnes of recycled waste), but contributed <1% of emissions due to lower emission factors, see Figure 12 for more detail. Emissions were almost evenly split between waste transportation (51%) and processing (49%), highlighting both landfill diversion and reduced transport needs as opportunities for future reduction.

Figure 11: Scope 3.5 Emissions Share by Waste Disposal Route: Landfill vs. Recycling (tCO_2e)

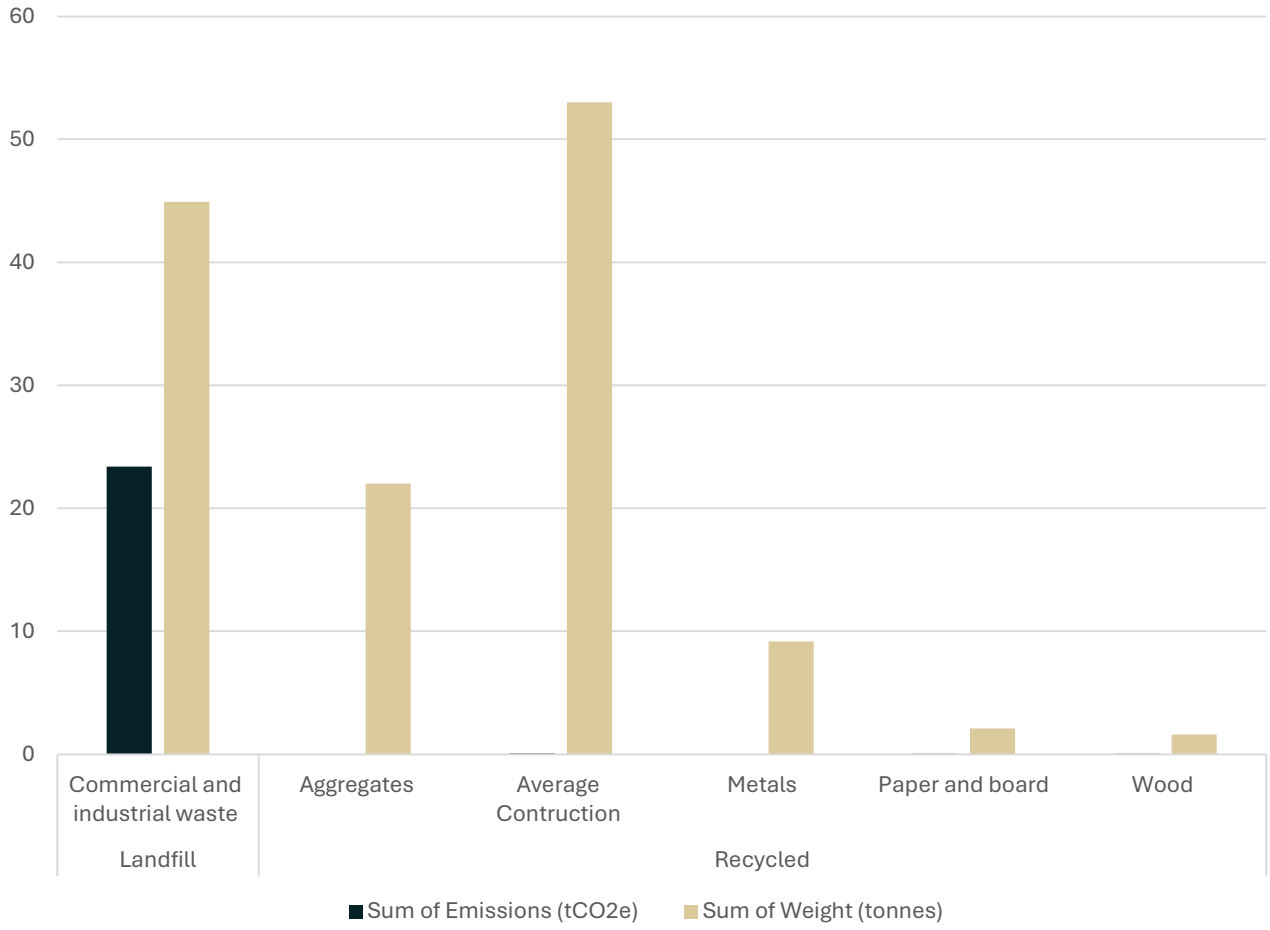


Figure 12: Scope 3.5 Total Weight and Emissions by Waste Type and Disposal Method (tCO_2e and tonnes)

4.4.6 Business Travel

Emissions from business travel totalled 111 tCO_2e for the reporting year. This includes travel by hire cars, mileage reimbursed to staff (in travel completed in vehicles not owned or operated by the company), and hotel stays during business trips.

The largest contributor was hotel stays, accounting for over 45% of total emissions, followed by mileage claims. Due to limited granularity in expense claims, all non-itemised claims were treated as mileage reimbursement, which may overestimate travel-related emissions.

Figure 13: Scope 3.6 Business Travel Emissions by Source (tCO_2e)

4.4.7 Employee Commuting

Scope 3.7 emissions from employee commuting totalled 66 tCO_2e for the reporting year. Petrol vehicles contributed the most at 43 tCO_2e (~65% of total commuting emissions), followed by diesel vehicles at 22 tCO_2e, with hybrid cars accounting for less than 1%.

Data quality was moderate, as the method used relied on actual commuting distance estimates and commuting frequency but assumptions were required for vehicle type.

Figure 14: Scope 3.7 Employee Commuting Emissions by Fuel Type (tCO_2e)

5 Hotspot Analysis

This baseline report identifies the most significant contributors to the company's greenhouse gas (GHG) emissions across all three scopes. The purpose of this hotspot analysis is to highlight where emissions are most concentrated, where data quality should be improved in future reporting, and to inform the focus areas for future reduction planning (covered in Section 6).

5.1 Emissions

Emissions for the baseline year totalled 10657 tCO_2e, with the largest share falling under Scope 3: the two highest contributing categories, together accounting for ~96% of Scope 3, were:

- **Upstream Transportation and Distribution** (8972 tCO_2e).
- **Purchased Goods and Services** (962 tCO_2e), driven by installation materials and subcontractor services.

Other notable hotspots include:

- **Fleet vehicles (Scope 1),** particularly Ford Transit Customs, which made up 60% of Scope 1 emissions.

A few additional areas are worth mentioning, but do not constitute priorities for immediate action due to their minor combined emissions impact (<1.5% of the total):

- **Landfilled waste (Scope 3.5)**, which accounted for 99% of waste processing emissions, and 49% of overall waste emissions (including transportation), despite similar landfill and recycling weights.
- **Hotel stays (Scope 3.6)**, which contributed nearly 50% of business travel emissions.

Visuals throughout this report (see Figures 1–14) illustrate these emission hotspots, supporting the identification of focus areas for future reduction initiatives.

5.2 Data Quality Improvements

The categories with largest emissions contributions with the largest data quality gaps - and therefore the highest priority for improvement (under GHG protocol)- are Upstream Transport & Distribution (3.6) and Purchased Goods & Services (3.1). Other categories of regulatory importance (such as PPN 06/21), including Business Travel and Employee Commuting, will also be prioritised for improved data quality in future reporting. In future reports, Downstream transport and distribution will also require higher quality data. For full breakdown of data quality review per category, see Appendix A.

Data quality has a material impact on reported emissions, particularly where estimation methods are applied. For Scope 3.4 (Upstream Transport and Distribution), the largest emissions source, accurate data was only supplied for 23% of Tier 1 suppliers. For the remaining suppliers, average weights and distances were used, introducing a risk of mis-reporting. While solar supplies appear as the dominant

hotspot, this partly reflects better data availability from solar suppliers compared with others. By contrast, HVAC supplies represented the highest spend but show lower reported emissions. While spend doesn't always correlate to emissions, this could be largely due to reliance on estimated freight weights and distances, likely understating HVAC emissions and highlights the need for more consistent supplier reporting.

For Scope 3.1 (Purchased Goods and Services), data quality is similarly low. No primary activity data (e.g. quantities or material composition) was available, and emissions were therefore calculated using a spend-based method. This method provides only a high-level estimate and introduces substantial uncertainty. Additionally, the SIC codes applied are typically for *wholesalers* rather than *manufacturers*, resulting in underestimation - particularly for solar PV equipment, which has notably high embodied carbon.

Another limitation arises because delivery costs were included within purchase prices, meaning transport and distribution emissions were effectively embedded within procurement data. This results in a dual risk: procurement emissions may be overstated (due to inclusion of delivery costs), while freight emissions are understated (due to lack of direct reporting).

Overall, both Purchased Goods and Upstream Transport categories rely heavily on assumptions and extrapolation rather than supplier-reported data, creating a high degree of uncertainty. Priority actions for improvement include collecting supplier-specific freight data (weights, distances, and modes), improving material-specific emissions factors, and ensuring suppliers report activity-level data in line with the GHG Protocol's preferred hierarchy of data quality.

6 Net Zero Targets and Planned Reduction Pathway

This section sets out Cotswold Energy Group's pathway to net zero, detailing the planned annual emissions reductions required to meet organisational targets, the key actions that will drive those reductions, and the approach to managing any unavoidable emissions through verified offsets. This approach ensures alignment with regulatory guidance and best practice, supporting continuous improvement and transparency throughout the decarbonisation journey.

To align with the wider Group strategy, Cotswold Energy Group has adopted the recommended 2040 net zero pathway. This includes a near-term target to achieve net zero for Scope 1 and 2 emissions by 2035, alongside a minimum 60% reduction in total emissions from the baseline year by 2035. This is followed by a 90% reduction in total emissions by 2040. The target emissions reduction pathway is shown in Figure 15 below, along with Base Year actual emissions.

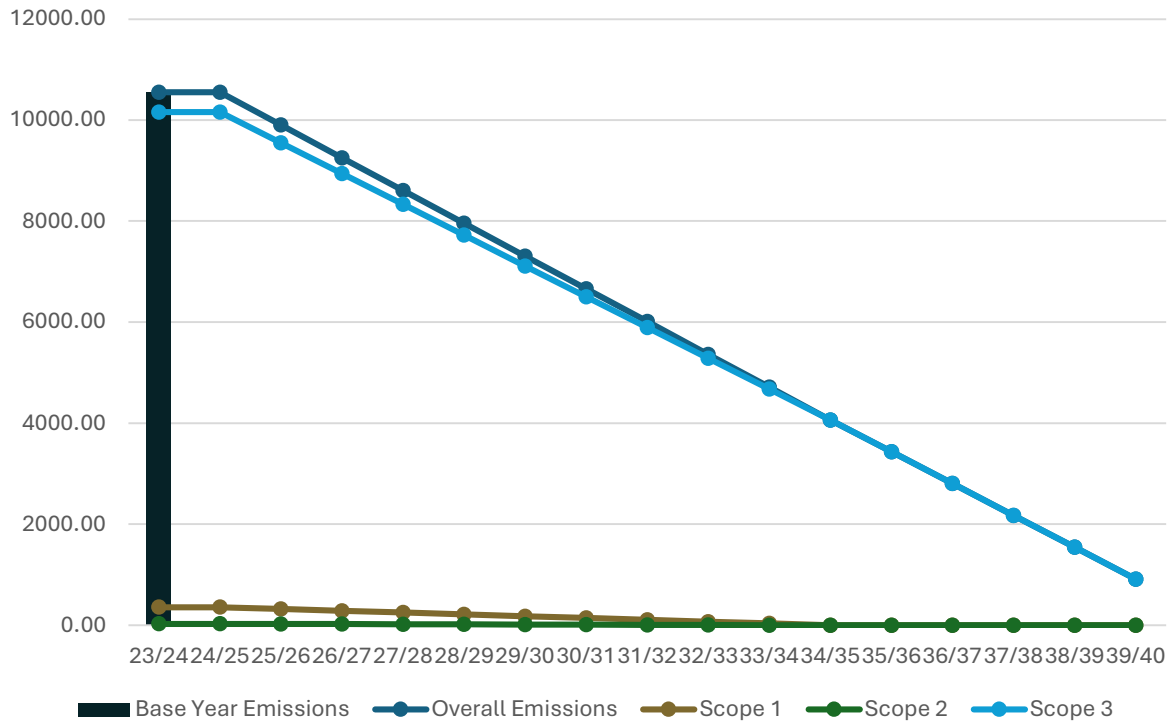


Figure 15: Net Zero Trajectory for Cotswold Energy Group Ltd - Actual Base Year Emissions and Projected Annual Reductions by Scope (2023/24–2039/40)

Ultimately, a reduction of all emissions in scope by at least 90% from the Base Year are needed by the target year to reach Net Zero Emissions. This is the minimum reduction allowable that can qualify as Net Zero. After achieving the targets and cutting emissions by at least 90%, Cotswold Energy Group Ltd must use permanent carbon removal and storage to offset the final <10% or residual emissions that cannot be eliminated. At this point, once long-term targets are achieved and residual emissions neutralised, Cotswold Energy Group will be considered to have reached Net Zero Emissions. An example of this Net Zero Emissions pathway, inclusive of the offsetting, is seen in figure 16 below.

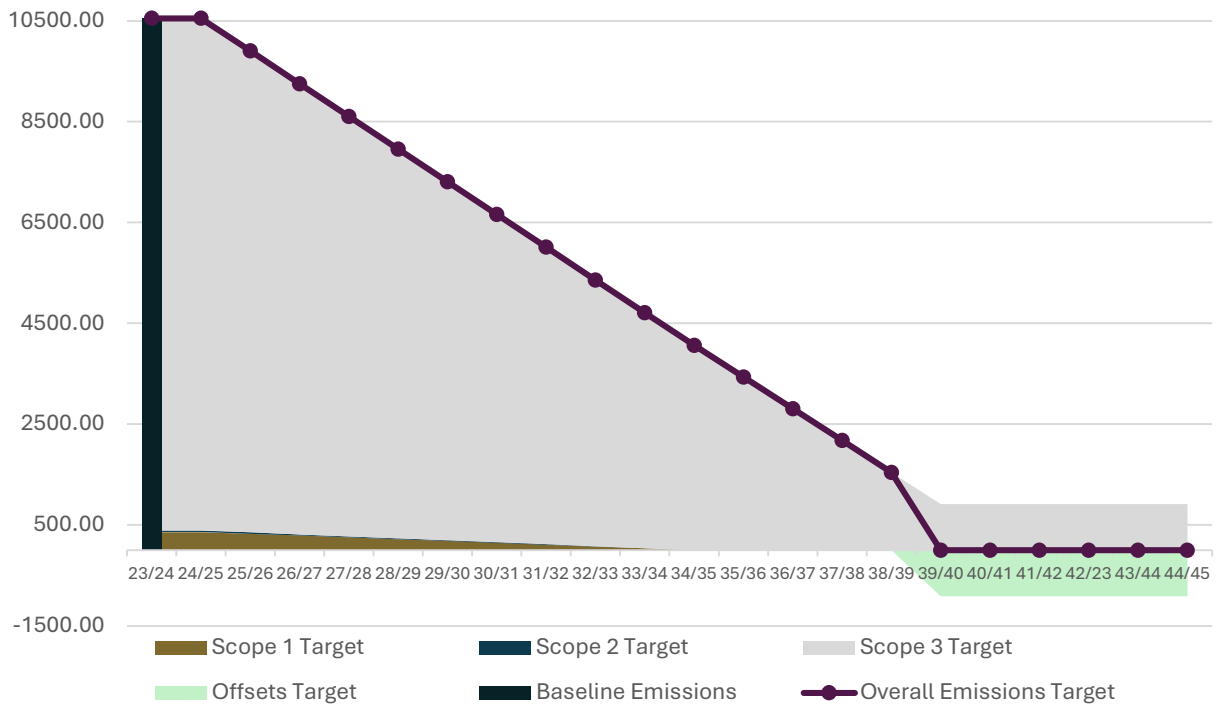


Figure 16: Example 2040 Net Zero Emissions Pathway, inclusive of offsetting, for Cotswold Energy Group Ltd (2023/24–2044/45)

Targets in the following sections have been established across each of the emissions categories. These are based on proposed emissions savings initiatives and expected emission factor trajectories for different emissions categories.

6.2 Scope 1 Net Zero Targets

Figure 17 below shows the total Scope 1 target pathway. Details of the reduction plan for each of the emissions categories are given below.

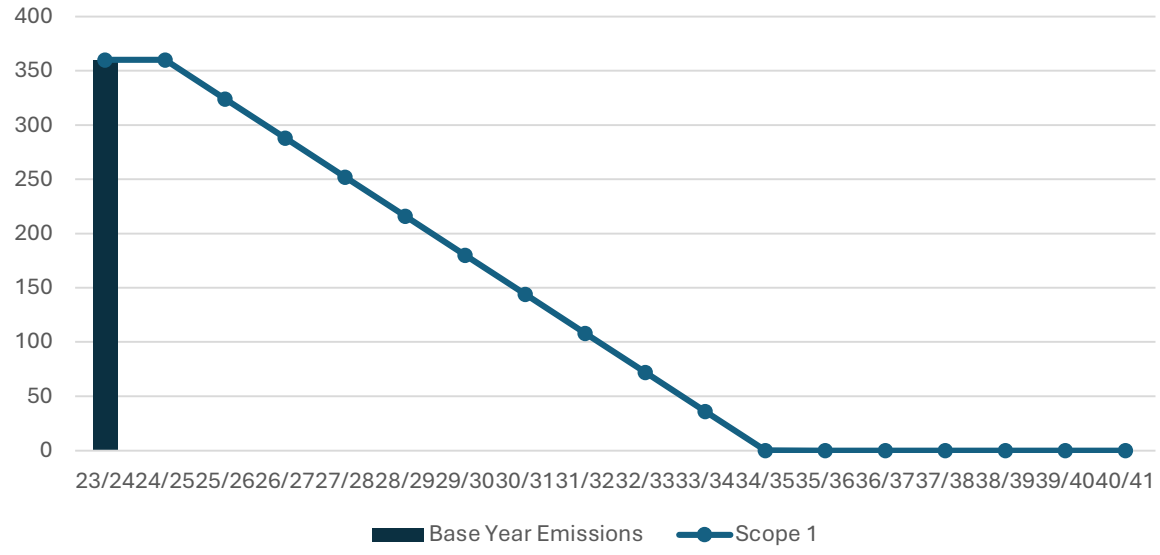


Figure 17: Scope 1 Target Pathway and Base Year Emissions

6.2.1 Fuels from company owned vehicles (Diesel, Petrol and LPG)

Emissions from company fleet vehicles and warehouse forklift trucks in the baseline year totalled 360.25 tCO_2e.

While the long-term goal is transitioning to a fully electric fleet, immediate reductions are limited by market availability of suitable EVs and charging infrastructure both at Cotswold Energy Group sites and at customer locations. A phased approach is proposed, with ongoing monitoring of industry developments to take advantage of emerging technologies as they become viable.

One interim measure is introduction of biodiesel blends for diesel vehicles, the largest Scope 1 contributors. Biodiesel can safely blend with conventional diesel (commonly up to 20%, i.e., B20), and used in most modern vehicles without modification. This approach allows flexibility as vehicles can still refuel with standard diesel when offsite, while a dedicated biodiesel refuelling point could be established at the warehouse. Based on UK Government emissions factors, switching to a B20 biodiesel blend could yield a reduction in vehicle emissions of approximately 2-6%.

Additional short-term actions include improved route and job scheduling for engineers, minimising unnecessary travel and optimise vehicle utilisation.

Both Petrol and Diesel have been set to achieve a 50% reduction by 29/30 and a 90% reduction by 35/36 in order to meet the 2035 and 2040 emissions targets.

To accurately track and verify emission reductions from alternative fuels and other efficiency measures, a transition to a fuel-based (litres purchased) activity method is recommended for future reporting cycles. This will enable more precise measurement of Scope 1 emissions and progress against reduction initiatives.

6.2.2 Fugitive Emissions

The fugitive emissions from refrigerant gas leaks are immaterial for this scope (<1%) and have a target set as such. Keeping up to date with air-conditioning system inspections and maintenance is essential as well as ensuring any system upgrade projects replace higher GWP refrigerants with those with a much lower potential impact (if a leak were to happen)

6.3 Scope 2 Net Zero Targets

Figure 18 below shows the total Scope 2 target pathway. Details of the reduction plan for each of the emissions categories are given below.

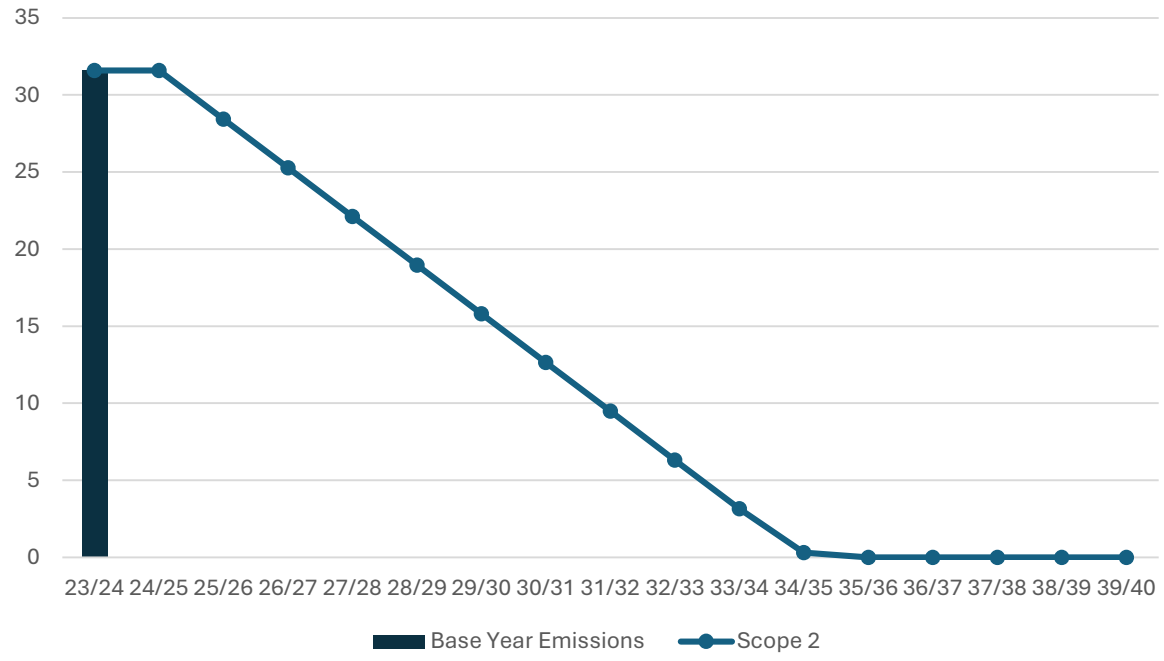


Figure 18: Scope 2 Target Pathway and Base Year Emissions

6.3.1 Purchased Electricity

Emissions from purchased electricity across the two sites in the Operational Scope, totalled 31.44tCO_2e. Emissions for the targets are calculated using 'Location-based' emissions factors, as per GHG protocol Corporate Reporting Standard and UK Government GHG Reporting Guidelines.

While the market-based emissions show a significantly reduced emissions value, they themselves cannot be considered a "net zero" emissions claim in the context of an organisation's GHG Footprint, but instead reflect the impact of renewable procurement choices. Therefore, to purchase truly zero emission electricity, organisations must enter into a dedicated Power Purchase Agreement (PPA) with a renewable electricity generator. This electricity is not traded in the UK market and is directedly attributable to the purchasing organisation and can therefore be used in the calculation of GHG emissions. Currently these types of PPA products are not available for small scale supply contracts for single buildings like the Owned Office and Warehouse site, but these may become available in the future.

Emissions reduction targets for imported electricity have been set with 2-5% year-on-year reduction. This may be achieved through efficiency savings and behaviour change efforts in the organisation. A steady 2% decline is expected in following years until 34/35 from an expected increase in renewables which make up the overall fuel mix in the UK. A total reduction to 0 tonnes of CO2e is set in 34/35 which will need to be achieved through a PPA. The target model assumes that PPAs will become available for small to medium sized businesses by that time. Alternatively, the target may also be achieved through installation of renewable energy generation technology or purchase of an estate on which renewable generation technology can be installed.

6.4 Scope 3 Net Targets

Figure 19 shows the total Scope 3 target trajectory alongside current baseline year emissions. The reduction plan for each material emissions category is detailed below.

Immaterial categories (those contributing less than 1% of total emissions) that are also not subject to regulatory compliance are not prioritised in the net zero reduction plan. These include Capital Goods (3.2), Fuel- and Energy-related Activities (3.3), and Leased Assets (3.8). These categories will continue to be monitored and will be addressed if their materiality changes in future reporting years.

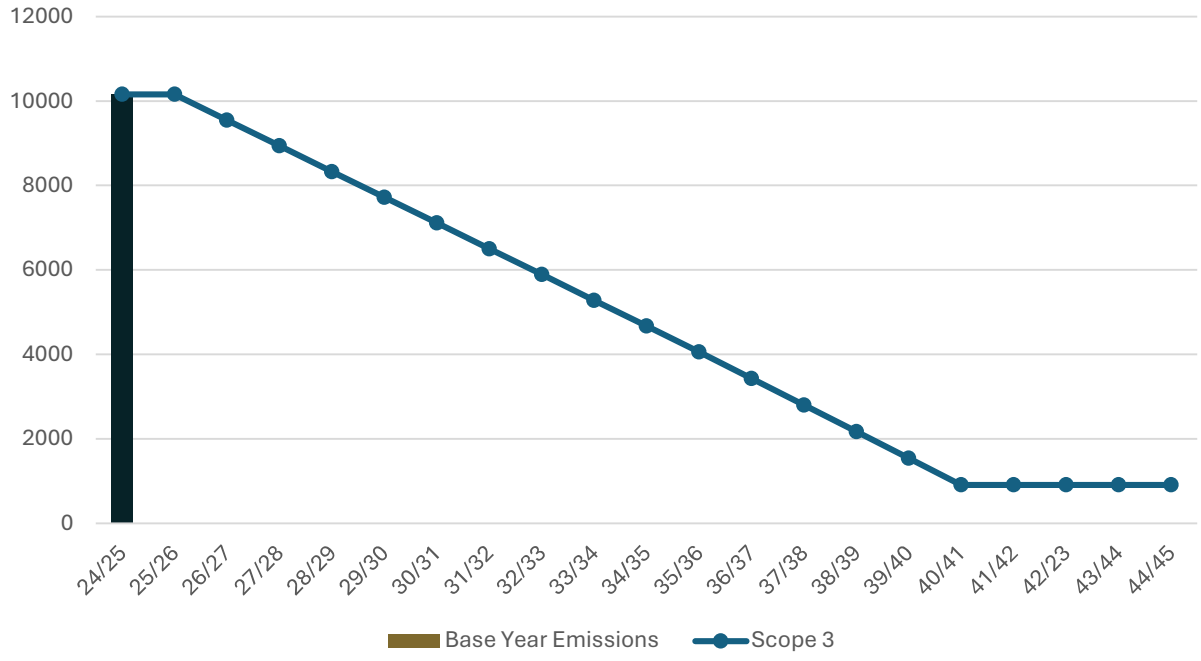


Figure 19: Scope 3 Target Pathway and Base Year Emissions

6.4.1 Purchased Goods and Services

Emissions from the products and services purchased from tier 1 suppliers in the base year totalled 926 tCO_2e.

All product and service sectors are targeted towards a 2050 trajectory with emissions decreasing by 1- 2% each year. To achieve a recommended target of 2040, the majority of purchasing categories are targeted to achieving a 50% reduction by 2035. Key actions to achieve this target include consolidation of multiple suppliers offering similar services, purchasing lower carbon products and services, and increasing in-house staff to reduce reliance on subcontractors to have more control over onsite related emissions.

A key initiative is the adoption of a Green Purchasing Policy. This policy will embed emissions considerations into all purchasing decisions, requiring the total carbon impact of products and long-term contracts to be assessed for compatibility with net zero targets before commitments are made. Where relevant, a carbon cost can be incorporated into purchasing criteria to reflect the offsetting required for any residual emissions.

In line with GHG Protocol guidance, supplier contracts will be updated to require the provision of emissions and activity data on request, ensuring transparency and supporting more accurate Scope 3 reporting. The Green Purchasing Policy is targeted for introduction by the end of 2025/26.

6.4.2 Upstream Transport and Distribution

Emissions from the transportation and distribution of purchased products from Cotswold Energy Group suppliers to their sites and storage facilities totalled 8972 tCO_2e.

An initial reduction of 10% has been set in 26/27 and is expected to be achieved by the organisation minimising deliveries by consolidation where feasible. Reduction of 60% by 2035 have been set with an expectation that electric good freighting vehicles will be more accessible by this date and low carbon suppliers will be opted for.

It is important to note that there is a moderate degree of estimation for product delivery emissions particularly relating to distances and weights transported. Improvement in the granularity of data collected regarding transportation of goods is recommended.

6.4.3 Waste Generated in Operations

Emissions from waste generated in operations were less than 1 percent of the total carbon footprint in the baseline year and are considered immaterial for the purposes of the net zero reduction plan. However, Cotswold Energy Group Ltd remains committed to best practice in waste management and continuous improvement in this area.

Initiatives should be included in the rollout of new Procurement Policies to focus and prioritise the purchase of products that can be recycled, refurbished, or upcycled. Waste management practices should maintain to be monitored to ensure that the recycling rate is as high as possible, and if current waste management suppliers change their methods to move over to a different company.

If waste emissions become material in future reporting cycles, specific reduction targets and action plans will be established. The group will also track developments in national waste management infrastructure and adjust targets as needed to align with progress towards net zero waste across the UK by 2050.

6.4.4 Business Travel

A Green Travel Policy would aid a reduction gradually per year as staff are encouraged to prioritise low carbon vehicles for hire cars, public transport and Zero Carbon Hotel Rooms when feasible and practical. A process for identifying such choices should be added to the expense process in conjunction with the policy.

The travel industry is expected to decarbonise by 2050 in line with UK commitments, having by30/31. Additionally with the expected increase of EVs on the road by 2030, this will reduce emissions from hire cars and employee mileage on the expectation that more EV will be available.

6.4.5 Employee Commuting

The number of EVs in the UK is forecast to be significantly higher (1 in 5 vehicles on the road are expected to be electric) by 2030, which will lead to reductions. New incentives are also to be introduced as early as 24/25 to meet targets and shift employee driving behaviour. This could include fiscal incentives for EV purchasing schemes, onsite EV charging facilities, supporting with homebased charge point installation, offering preferential parking access for those with low emission vehicles and educating employees on the benefits of EVs.

6.5 Emissions Offsets

Carbon offsets (sometimes called Carbon Credits) need to be measurable, verifiable emissions reductions or removals from certified climate action projects. These projects remove, reduce or prevent greenhouse gas (GHG) emissions from the atmosphere.

However, only emissions removal is acceptable as part of Net Zero status, as required under the GHG Protocol. After a company has achieved its long-term target and cut emissions by more than 90%, it must use permanent carbon removal and storage to counterbalance the final less than 10% of residual emissions that cannot be eliminated.

An example of how this would look in regard to the Net Zero Target, please see Figure 16.

6.6 Monitoring & Review

If future improvements in data quality or reporting boundaries result in a restatement of our baseline year emissions, our net zero targets and milestones will be recalculated to ensure alignment with the most recent, accurate data available. The percentage reduction commitment will remain unchanged.

Immaterial categories (< 1% total emissions) that are also not subject to regulatory compliance are not prioritised in the net zero reduction plan, including Capital Goods (3.2), Fuel- and Energy-related Activities (3.3), and Leased Assets (3.8), will continue to be monitored and will be addressed if their materiality changes in future reporting years.

Appendix .

Emission factors primarily come from the UK Government's 2023 DESNZ conversion factors for greenhouse gas reporting. Although the reporting year spans 2023 and 2024, 2023 factors were used in line with GHG Protocol guidance, as the majority of operational activity (9 months) took place in 2023.

Where data was limited or considered lower priority during screening, spend-based methods were applied. In these cases, spend data was inflation-adjusted using Bank of England, 2024 data to ensure emissions are calculated in real terms. Additional emission factors were sourced from the University of Leeds (2021) Environmentally Extended Input-Output (EEIO) model, which links SIC codes to associated emissions for spend-based estimates.

For the purposes of the report, overall and scope 3 emissions have been rounded to the nearest whole number due to the high level of uncertainty of the lower quality data. Percentages have also been rounded. Scope 1 & 2 emissions are reported in 1 decimal place.

4 Base Year Emissions

All emissions from activities described in Table 1 have been analysed for Cotswold Energy Group, enabling carbon emissions to be calculated for the baseline year, defined as 1st April 2023 – 31st March 2024.

This analysis also enabled the Organisational Scope to be validated ensuring any additional areas identified as part of the data collections process have been included within the boundary.

Total carbon emissions for Cotswold Energy Group during the Baseline Year were **10,657 tCO_2e**.

To ensure fair year-on-year comparisons, and allow tracking of significant changes of the organisations carbon emissions, there may be a need to re-baseline based on the following reasons due to either a) structural changes (acquiring or selling a business within the group), b) Outsourcing / insourcing (moving a core activity from in-house (scope 1) to a contractor (scope 3), c) Methodology changed (getting better data for a major emissions source) or d) Discovery of errors (finding a significant error in the original data). Organic changes to the business will not be cause for re-baselining as the carbon footprint shouldn't reflect size of organisation.

For CEG, the recommendations is to set a >5% significance threshold, meaning only major changes will result in a recalculation and is line with best practice.

4.1 Emissions Breakdown

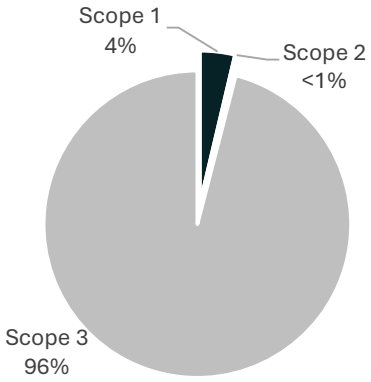


Figure 1 provides a breakdown of total baseline emissions.

The sections that follow provide detailed breakdowns and comparisons within each scope category where contribution was material (>1% of total emissions) and/or are subject to regulatory compliance.

A full breakdown of all emissions by source is provided in Appendix D.

4.2 Scope 1 Emissions

The total Scope 1 emissions for the reporting year were 360.25 tCO_2e, arising from fuel combustion in fleet vehicles, LPG use for warehouse equipment, and fugitive emissions from air conditioning systems at the office building (1 Upper Mills).

Figure 1: Baseline carbon emissions of Cotswold Energy Group Ltd in 2023/2024

Diesel fleet vehicles accounted for over 99% of total Scope 1 emissions, with the Ford Transit Customs alone responsible for 60% (216.7 tCO_2e). See Table 3 below for breakdown of vehicle types and associated emissions.

Scope 1 emissions were calculated using the activity-based methods, drawn from high-quality data.

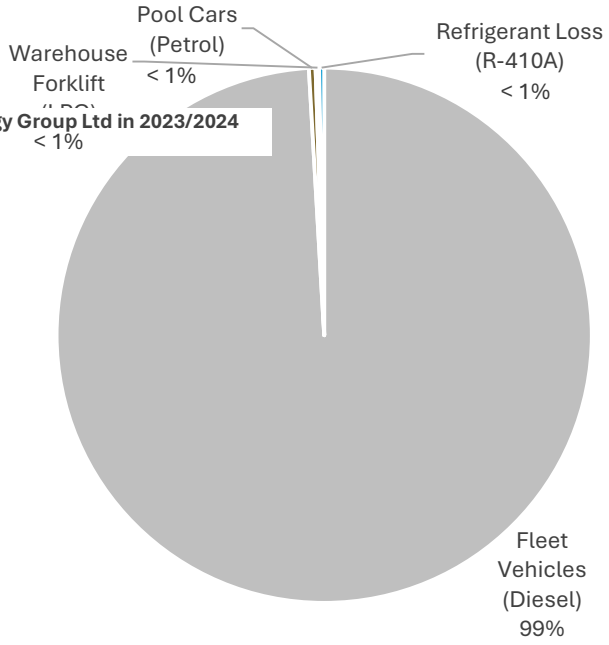


Figure 2: Scope 1 Emissions by Fuel Type (tCO_2e) (Diesel, Petrol, LPG, Refrigerants)

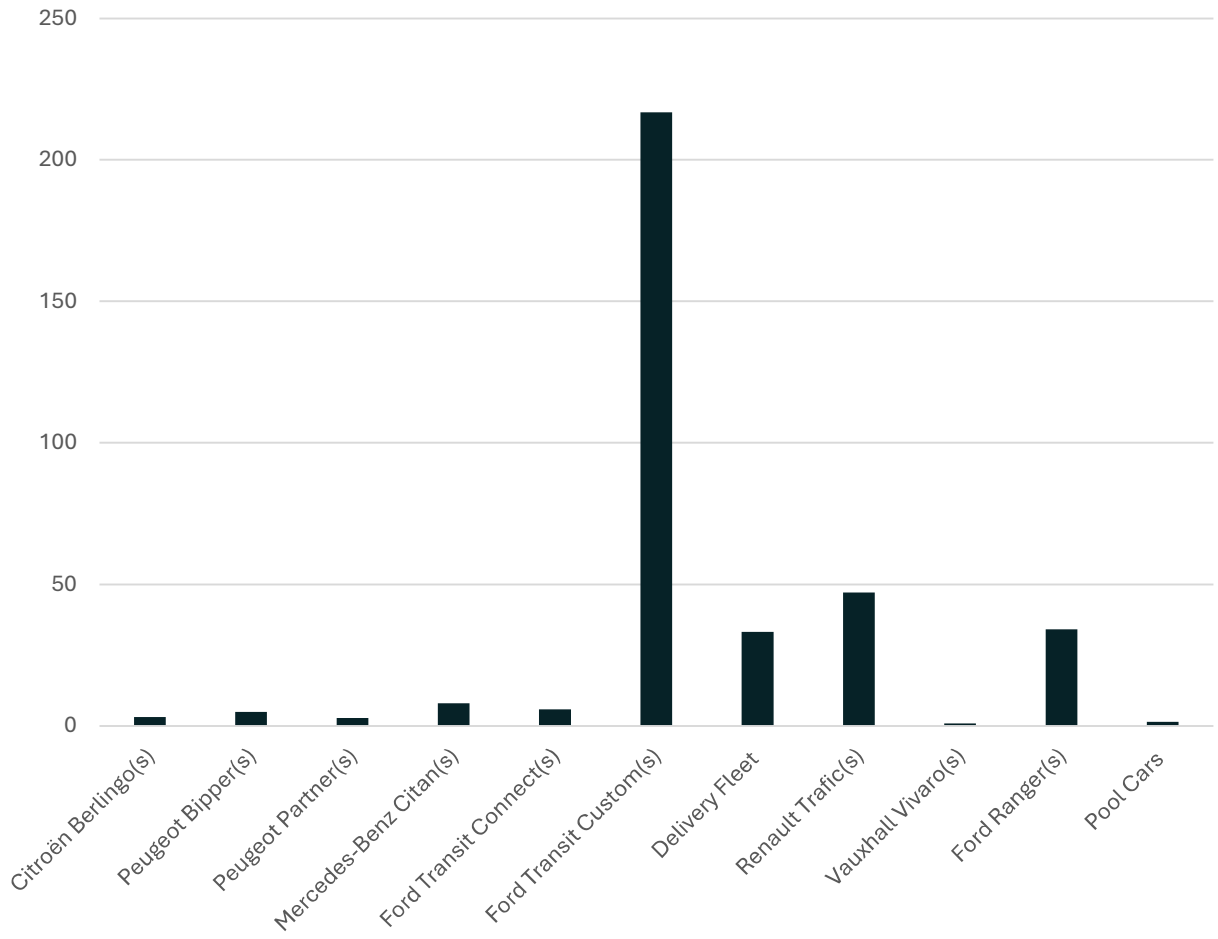


Figure 3: Scope 1 Vehicle Emissions by Vehicle Type (tCO_2e)

4.3 Scope 2 Emissions

The total Scope 2 emissions for the reporting year were 31.4 tCO_2e under the market-based method. The majority of these emissions (86%) originated from electricity use at the company's rented office building (1 Upper Mills), where 128,560 kWh were consumed in the reporting year.

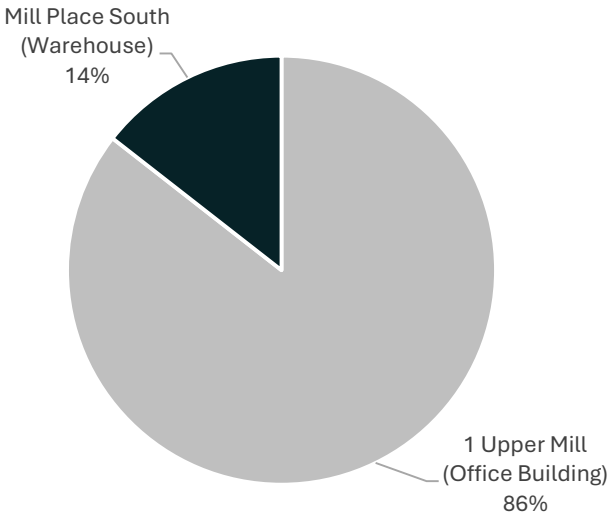


Figure 4: Scope 2 Emissions by Site (tCO_2e) – Market-Based

British Gas provided a market-based emissions factor directly on the energy bills for 1 Upper Mill. As the supplier claims to source the majority of its electricity from renewable energy, market-based emissions for this site were significantly lower at 6.4 tCO_2e, compared to 31.4 tCO_2e under the location-based method; approximately a 80% reduction when using supplier-specific factors instead of national grid averages. This difference is visualised in Figure 5 below.

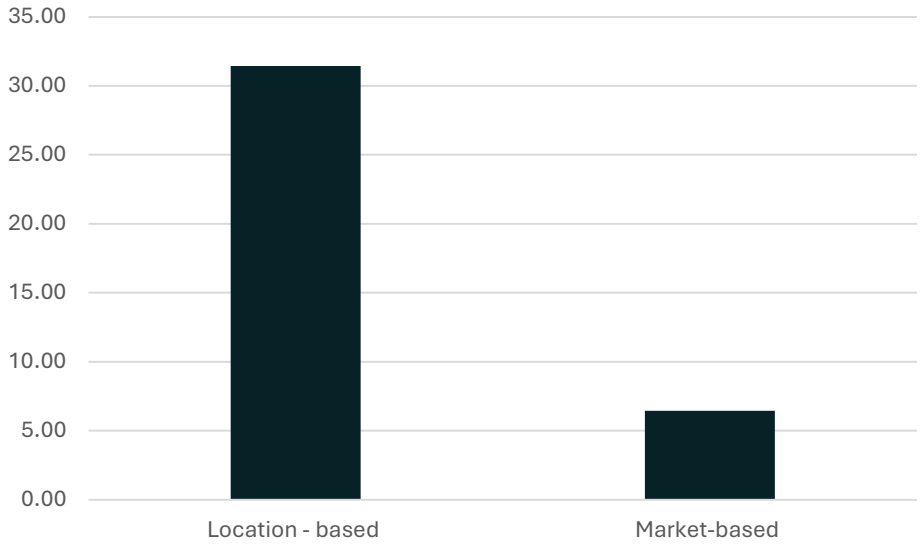
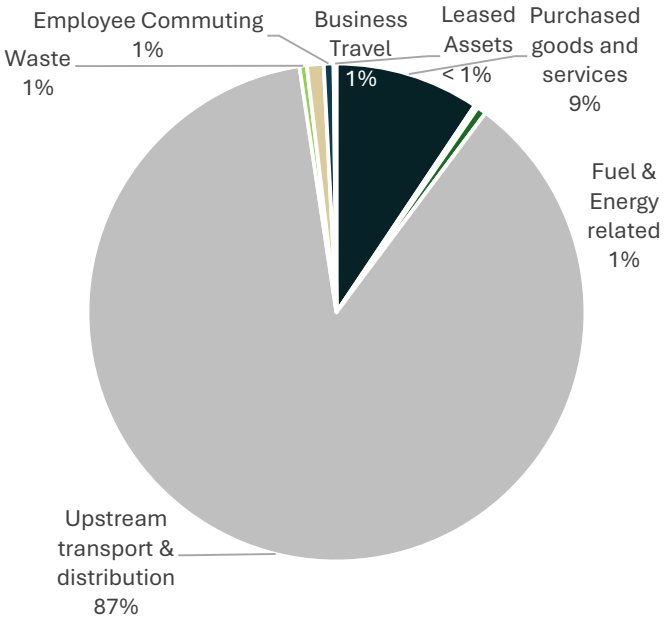


Figure 5: Scope 2 Emissions (tCO_2e) by Method – Market-Based vs Location-Based

4.4 Scope 3 Emissions

Scope 3 emissions accounted for the vast majority of the company's total carbon footprint in the baseline year, totalling 10,657 tCO_2e. The largest contributor was Upstream Transport & Distribution (~87% of Scope 3), followed by Purchased Goods and Services (~9%). Other relevant categories included Leased Assets, Fuel & Energy-Related Activities, Business Travel, Employee Commuting, and Waste, each contributing between 0% and 1% of total Scope 3 emissions.

Figure 6 provides a visual breakdown of Scope 3 emissions by reporting category [2]. Detailed analysis of each category is provided in the sections that follow.



[2] For clarity, capital goods (Scope3 category 2) have been excluded from the figure as their contribution was only 0.2% of Scope 3 emissions, and there is currently no regulatory requirement to report on this category.

Figure 6: Scope 3 Emissions by Category (tCO_2e), Baseline Year

As discussed in 4.1, some Scope 3 categories are not included in the detailed breakdown to follow as they are immaterial (<1% contribution to emissions and not subject to regulatory compliant. This includes Capital Goods (3.2), Fuel- and Energy-related activities (3.3) and Leased Assets (3.8).

4.4.1 Purchased Goods and Services

Total emissions for Scope 3.1 (Purchased Goods and Services) were 962 tCO_2e, based on a total procurement spend of £7.12 million. Emissions were calculated using a spend-based method, applying industry-average emissions factors by sector. As spend-based methods are less precise than activity-based approaches, data quality is considered low for this category.

Emissions were concentrated in two main categories: installation materials (431 tCO_2e,) and subcontractor services (391 tCO_2e), together accounting for 85% of Scope 3.1 emissions (see Figure 7).

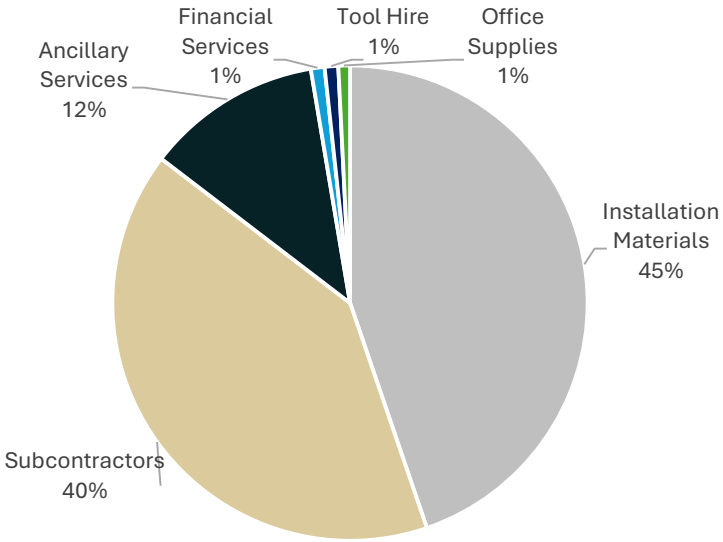


Figure 7: Scope 3.1 Emissions by Goods and Services Type (tCO_2e)

Figure 8 presents a comparison of emissions and procurement spend by goods and service type. While installation materials had the highest emissions and spend overall, subcontractors and ancillary services showed a notably high emissions intensity relative to spend, indicating a potentially high-carbon supply area worth further review.

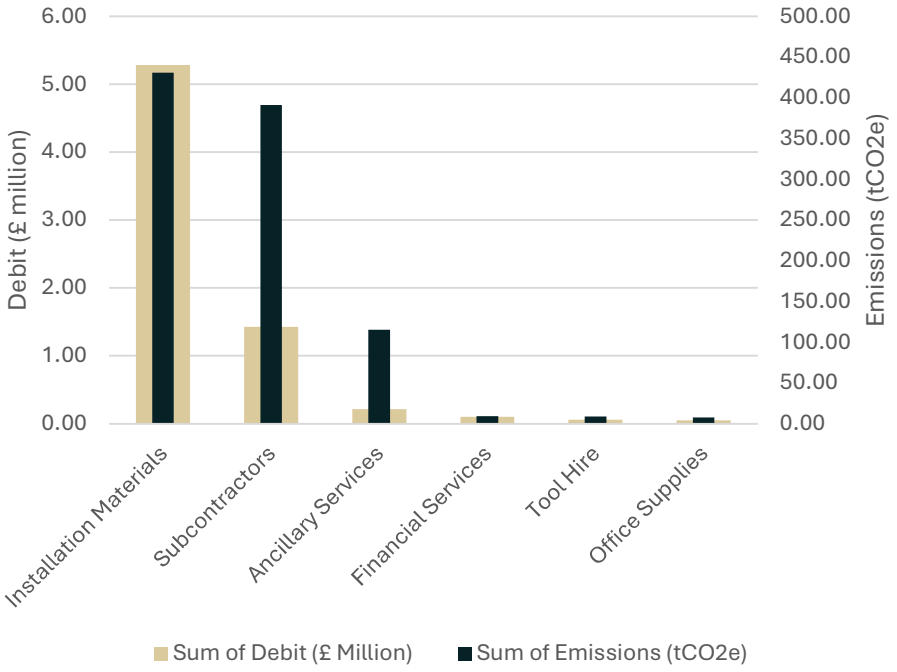
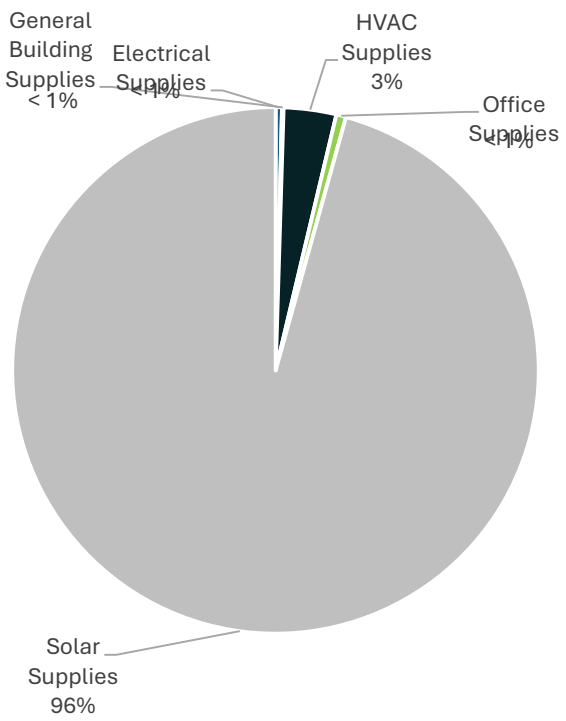


Figure 8: Scope 3.1 Emissions and Spend by Goods and Services Type (tCO_2e and £ Million)

4.4.3 Upstream transportation and distribution



Total emissions for Scope 3.4 (Upstream Transport and Distribution) were 8972 tCO_2e, making this by far the largest contributor to Scope 3 emissions (~87% of total Scope 3, and ~85% of total company emissions).The vast majority of this scope (~93%) were attributed to inbound deliveries of solar PV equipment (8583 tCO_2e), mainly from Midsummer Energy (8580 tCO_2e).

Other categories contributed comparatively small amounts, including HVAC supplies (292 tCO_2e, ~3%), office supplies (53 tCO_2e, <1%), electrical supplies (35 tCO_2e, <1%) and general building supplies (9 tCO_2e, <1%).

The data quality for this category is very low and a lot of assumptions have been used – see Appendix A for further details.

Figure 9: Scope 3.4 Emissions by category (tCO_2e)

4.4.4 Waste generated in operations

Scope 3.5 (waste generated in operations) totalled 48 tCO_2e. Landfilled commercial and industrial waste accounted for 99% of all emissions from waste processing (23 tCO_2e), Recycled materials represented the majority of waste by weight (44.9 tonnes of landfilled waste compared to 87.9 tonnes of recycled waste), but contributed <1% of emissions due to lower emission factors, see Figure 12 for more detail. Emissions were almost evenly split between waste transportation (51%) and processing (49%), highlighting both landfill diversion and reduced transport needs as opportunities for future reduction.

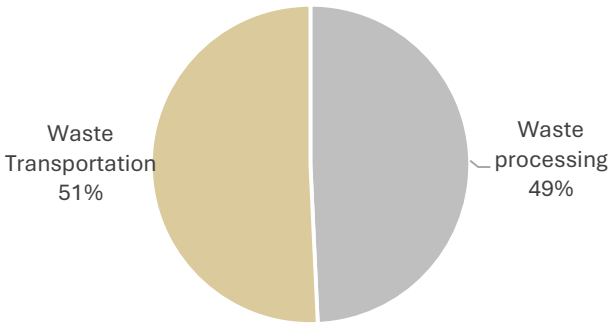


Figure 10: Scope 3.5 Emissions by Waste Management Stage - Transportation and Processing (tCO_2e)

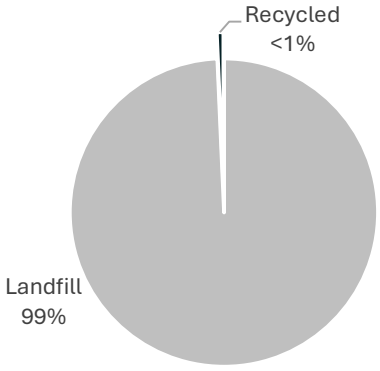


Figure 11: Scope 3.5 Emissions Share by Waste Disposal Route: Landfill vs. Recycling (tCO_2e)

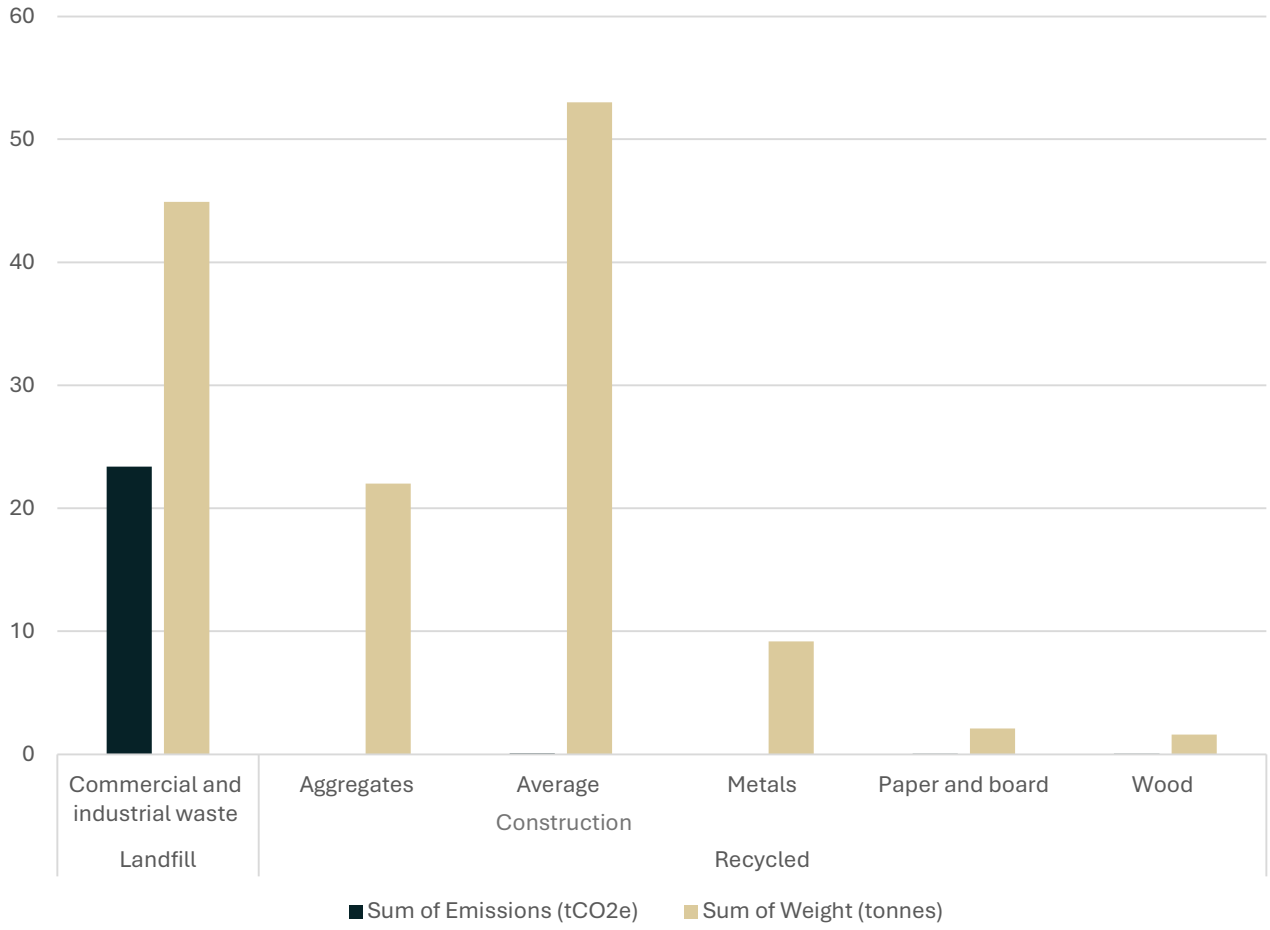


Figure 12: Scope 3.5 Total Weight and Emissions by Waste Type and Disposal Method (tCO_2e and tonnes)

4.4.6 Business Travel

Emissions from business travel totalled 111 tCO_2e for the reporting year. This includes travel by hire cars, mileage reimbursed to staff (in travel completed in vehicles not owned or operated by the company), and hotel stays during business trips.

The largest contributor was hotel stays, accounting for over 45% of total emissions, followed by mileage claims. Due to limited granularity in expense claims, all non-itemised claims were treated as mileage reimbursement, which may overestimate travel-related emissions.

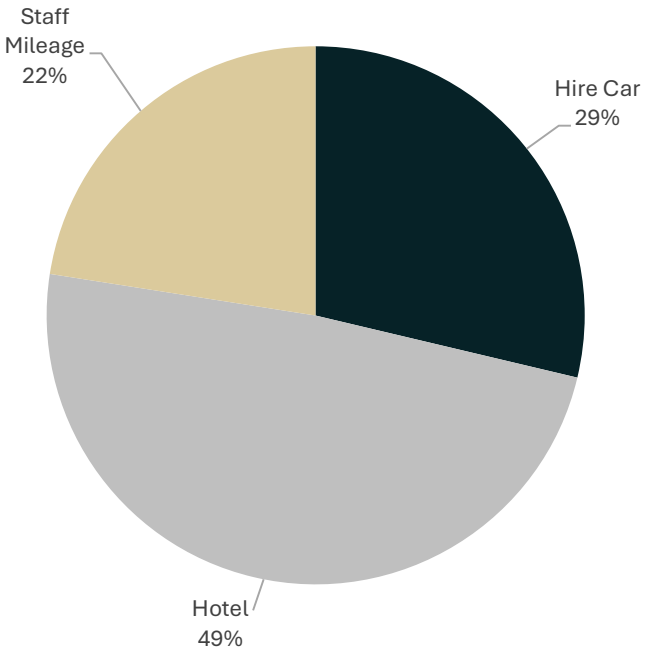


Figure 13: Scope 3.6 Business Travel Emissions by Source (tCO_2e)

4.4.7 Employee Commuting

Scope 3.7 emissions from employee commuting totalled 66 tCO_2e for the reporting year. Petrol vehicles contributed the most at 43 tCO_2e (~65% of total commuting emissions), followed by diesel vehicles at 22 tCO_2e, with hybrid cars accounting for less than 1%.

Data quality was moderate, as the method used relied on actual commuting distance estimates and commuting frequency but assumptions were required for vehicle type.

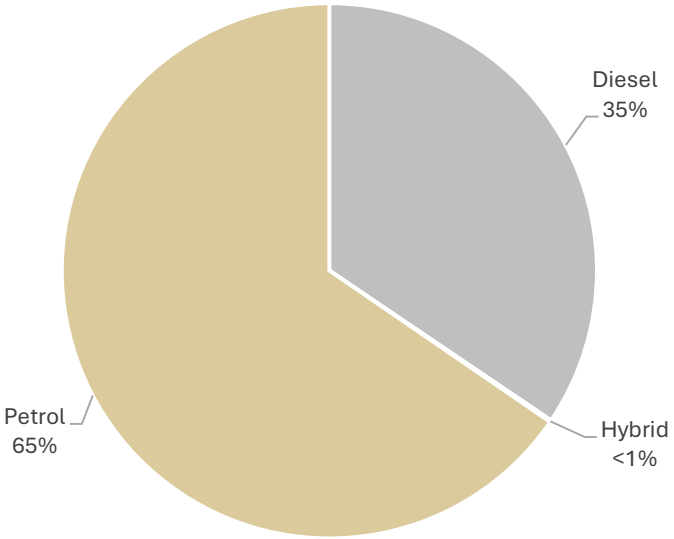


Figure 14: Scope 3.7 Employee Commuting Emissions by Fuel Type (tCO_2e)

5 Hotspot Analysis

This baseline report identifies the most significant contributors to the company's greenhouse gas (GHG) emissions across all three scopes. The purpose of this hotspot analysis is to highlight where emissions are most concentrated, where data quality should be improved in future reporting, and to inform the focus areas for future reduction planning (covered in Section 6).

5.1 Emissions

Emissions for the baseline year totalled 10657 tCO_2e, with the largest share falling under Scope 3: the two highest contributing categories, together accounting for ~96% of Scope 3, were:

- **Upstream Transportation and Distribution** (8972 tCO_2e).
- **Purchased Goods and Services** (962 tCO_2e), driven by installation materials and subcontractor services.

Other notable hotspots include:

- **Fleet vehicles (Scope 1),** particularly Ford Transit Customs, which made up 60% of Scope 1 emissions.

A few additional areas are worth mentioning, but do not constitute priorities for immediate action due to their minor combined emissions impact (<1.5% of the total):

- **Landfilled waste (Scope 3.5)**, which accounted for 99% of waste processing emissions, and 49% of overall waste emissions (including transportation), despite similar landfill and recycling weights.
- **Hotel stays (Scope 3.6)**, which contributed nearly 50% of business travel emissions.

Visuals throughout this report (see Figures 1–14) illustrate these emission hotspots, supporting the identification of focus areas for future reduction initiatives.

5.2 Data Quality Improvements

The categories with largest emissions contributions with the largest data quality gaps - and therefore the highest priority for improvement (under GHG protocol)- are Upstream Transport & Distribution (3.6) and Purchased Goods & Services (3.1). Other categories of regulatory importance (such as PPN 06/21), including Business Travel and Employee Commuting, will also be prioritised for improved data quality in future reporting. In future reports, Downstream transport and distribution will also require higher quality data[3]. For full breakdown of data quality review per category, see Appendix A.

Data quality has a material impact on reported emissions, particularly where estimation methods are applied. For Scope 3.4 (Upstream Transport and Distribution), the largest emissions source, accurate data was only supplied for 23% of Tier 1 suppliers. For the remaining suppliers, average weights and distances were used, introducing a risk of mis-reporting. While solar supplies appear as the dominant hotspot, this partly reflects better data availability from solar suppliers compared with others. By contrast, HVAC supplies represented the highest spend but show lower reported emissions. While spend doesn't always correlate to emissions, this could be largely due to reliance on estimated freight weights and distances, likely understating HVAC emissions and highlights the need for more consistent supplier reporting.

For Scope 3.1 (Purchased Goods and Services), data quality is similarly low. No primary activity data (e.g. quantities or material composition) was available, and emissions were therefore calculated using a spend-based method. This method provides only a high-level estimate and introduces substantial uncertainty. Additionally, the SIC codes applied are typically for *wholesalers* rather than *manufacturers*, resulting in underestimation - particularly for solar PV equipment, which has notably high embodied carbon.

Another limitation arises because delivery costs were included within purchase prices, meaning transport and distribution emissions were effectively embedded within procurement data. This results in a dual risk: procurement emissions may be overstated (due to inclusion of delivery costs), while freight emissions are understated (due to lack of direct reporting).

Overall, both Purchased Goods and Upstream Transport categories rely heavily on assumptions and extrapolation rather than supplier-reported data, creating a high degree of uncertainty. Priority actions for improvement include collecting supplier-specific freight data (weights, distances, and modes), improving material-specific emissions factors, and ensuring suppliers report activity-level data in line with the GHG Protocol's preferred hierarchy of data quality.

[3] Downstream transport and distribution category has been excluded for this baseline year, as described in table 2, but the data quality requirement has been included in this analysis for the purpose of potential future reporting.

6 Net Zero Targets and Planned Reduction Pathway

This section sets out Cotswold Energy Group's pathway to net zero, detailing the planned annual emissions reductions required to meet organisational targets, the key actions that will drive those reductions, and the approach to managing any unavoidable emissions through verified offsets. This approach ensures alignment with regulatory guidance and best practice, supporting continuous improvement and transparency throughout the decarbonisation journey.

To align with the wider Group strategy, Cotswold Energy Group has adopted the recommended 2040 net zero pathway. This includes a near-term target to achieve net zero for Scope 1 and 2 emissions by 2035, alongside a minimum 60% reduction in total emissions from the baseline year by 2035. This is followed by a 90% reduction in total emissions by 2040. The target emissions reduction pathway is shown in Figure 15 below, along with Base Year actual emissions.

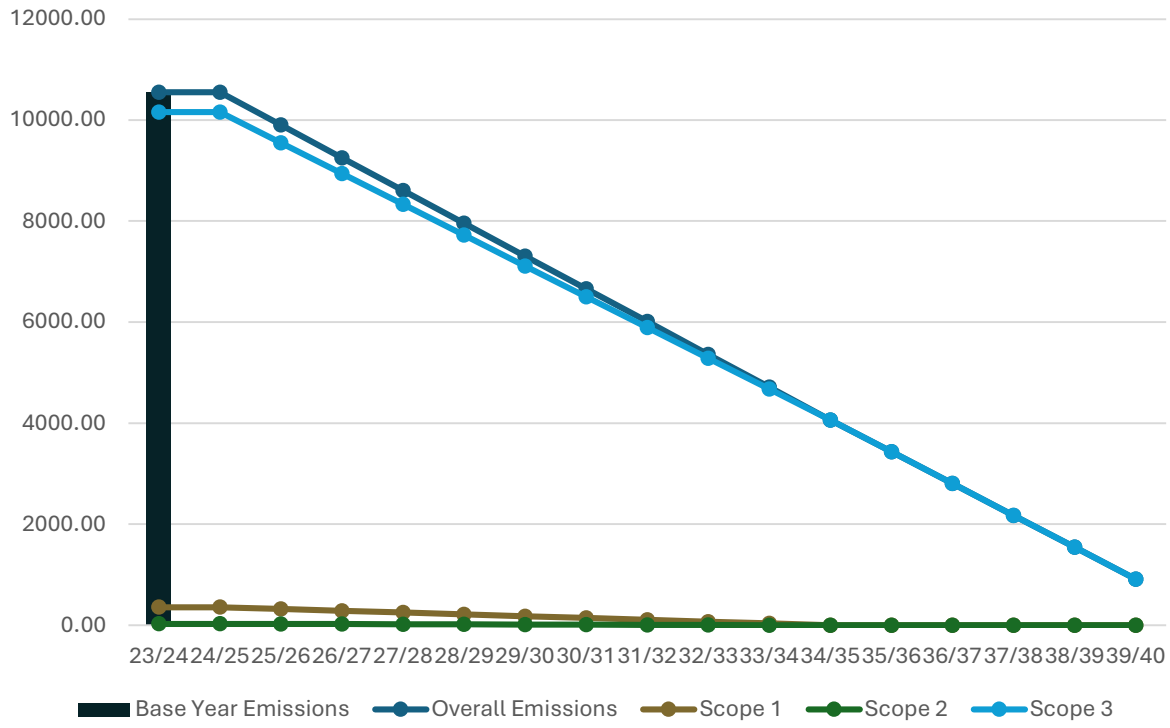


Figure 15: Net Zero Trajectory for Cotswold Energy Group Ltd - Actual Base Year Emissions and Projected Annual Reductions by Scope (2023/24–2039/40)

Ultimately, a reduction of all emissions in scope by at least 90% from the Base Year are needed by the target year to reach Net Zero Emissions. This is the minimum reduction allowable that can qualify as Net Zero. After achieving the targets and cutting emissions by at least 90%, Cotswold Energy Group Ltd must use permanent carbon removal and storage to offset the final <10% or residual emissions that cannot be eliminated. At this point, once long-term targets are achieved and residual emissions neutralised, Cotswold Energy Group will be considered to have reached Net Zero Emissions. An example of this Net Zero Emissions pathway, inclusive of the offsetting, is seen in figure 16 below.

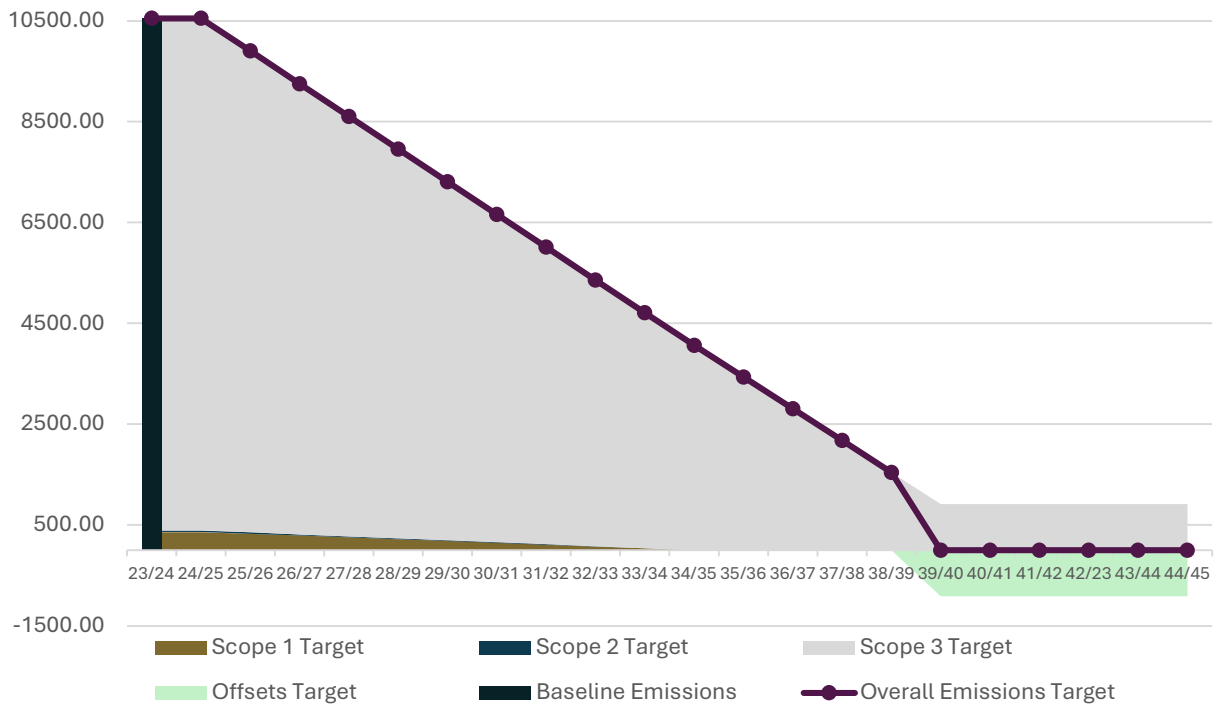


Figure 16: Example 2040 Net Zero Emissions Pathway, inclusive of offsetting, for Cotswold Energy Group Ltd (2023/24–2044/45)

Targets in the following sections have been established across each of the emissions categories. These are based on proposed emissions savings initiatives and expected emission factor trajectories for different emissions categories.

6.2 Scope 1 Net Zero Targets

Figure 17 below shows the total Scope 1 target pathway. Details of the reduction plan for each of the emissions categories are given below.

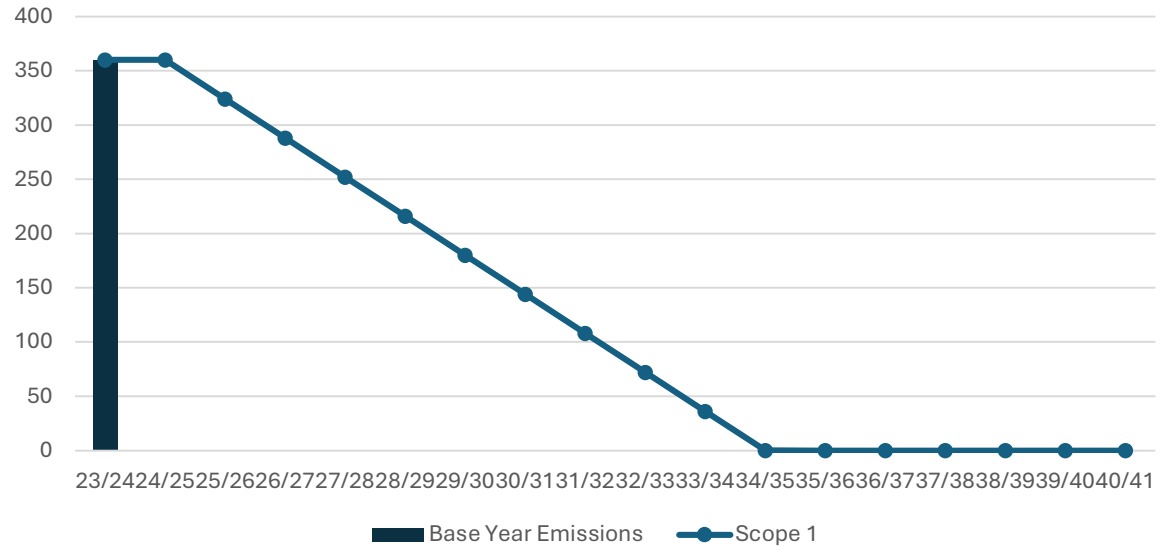


Figure 17: Scope 1 Target Pathway and Base Year Emissions

6.2.1 Fuels from company owned vehicles (Diesel, Petrol and LPG)

Emissions from company fleet vehicles and warehouse forklift trucks in the baseline year totalled 360.25 tCO_2e.

While the long-term goal is transitioning to a fully electric fleet, immediate reductions are limited by market availability of suitable EVs and charging infrastructure both at Cotswold Energy Group sites and at customer locations. A phased approach is proposed, with ongoing monitoring of industry developments to take advantage of emerging technologies as they become viable.

One interim measure is introduction of biodiesel blends for diesel vehicles, the largest Scope 1 contributors. Biodiesel can safely blend with conventional diesel (commonly up to 20%, i.e., B20), and used in most modern vehicles without modification. This approach allows flexibility as vehicles can still refuel with standard diesel when offsite, while a dedicated biodiesel refuelling point could be established at the warehouse. Based on UK Government emissions factors, switching to a B20 biodiesel blend could yield a reduction in vehicle emissions of approximately 2-6%[4].

Additional short-term actions include improved route and job scheduling for engineers, minimising unnecessary travel and optimise vehicle utilisation.

Both Petrol and Diesel have been set to achieve a 50% reduction by 29/30 and a 90% reduction by 35/36 in order to meet the 2035 and 2040 emissions targets.

To accurately track and verify emission reductions from alternative fuels and other efficiency measures, a transition to a fuel-based (litres purchased) activity method is recommended for future reporting cycles. This will enable more precise measurement of Scope 1 emissions and progress against reduction initiatives.

6.2.2 Fugitive Emissions

The fugitive emissions from refrigerant gas leaks are immaterial for this scope (<1%) and have a target set as such. Keeping up to date with air-conditioning system inspections and maintenance is essential as well as ensuring any system upgrade projects replace higher GWP refrigerants with those with a much lower potential impact (if a leak were to happen)

[4] https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting

6.3 Scope 2 Net Zero Targets

Figure 18 below shows the total Scope 2 target pathway. Details of the reduction plan for each of the emissions categories are given below.

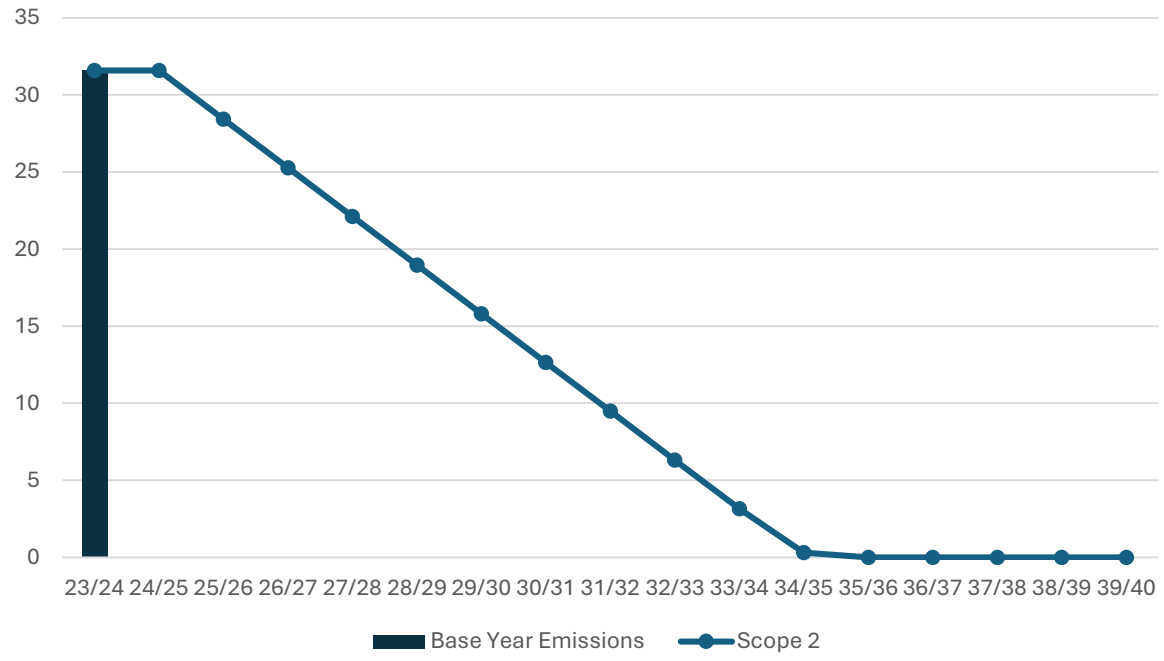


Figure 18: Scope 2 Target Pathway and Base Year Emissions

6.3.1 Purchased Electricity

Emissions from purchased electricity across the two sites in the Operational Scope, totalled 31.44tCO_2e. Emissions for the targets are calculated using 'Location-based' emissions factors, as per GHG protocol Corporate Reporting Standard and UK Government GHG Reporting Guidelines.

While the market-based emissions show a significantly reduced emissions value, they themselves cannot be considered a "net zero" emissions claim in the context of an organisation's GHG Footprint, but instead reflect the impact of renewable procurement choices. Therefore, to purchase truly zero emission electricity, organisations must enter into a dedicated Power Purchase Agreement (PPA) with a renewable electricity generator. This electricity is not traded in the UK market and is directedly attributable to the purchasing organisation and can therefore be used in the calculation of GHG emissions. Currently these types of PPA products are not available for small scale supply contracts for single buildings like the Owned Office and Warehouse site, but these may become available in the future.

Emissions reduction targets for imported electricity have been set with 2-5% year-on-year reduction. This may be achieved through efficiency savings and behaviour change efforts in the organisation. A steady 2% decline is expected in following years until 34/35 from an expected increase in renewables which make up the overall fuel mix in the UK. A total reduction to 0 tonnes of CO2e is set in 34/35 which will need to be achieved through a PPA. The target model assumes that PPAs will become available for small to medium sized businesses by that time. Alternatively, the target may also be achieved through installation of renewable energy generation technology or purchase of an estate on which renewable generation technology can be installed.

6.4 Scope 3 Net Targets

Figure 19 shows the total Scope 3 target trajectory alongside current baseline year emissions. The reduction plan for each material emissions category is detailed below.

Immaterial categories (those contributing less than 1% of total emissions) that are also not subject to regulatory compliance are not prioritised in the net zero reduction plan. These include Capital Goods (3.2), Fuel- and Energy-related Activities (3.3), and Leased Assets (3.8). These categories will continue to be monitored and will be addressed if their materiality changes in future reporting years.

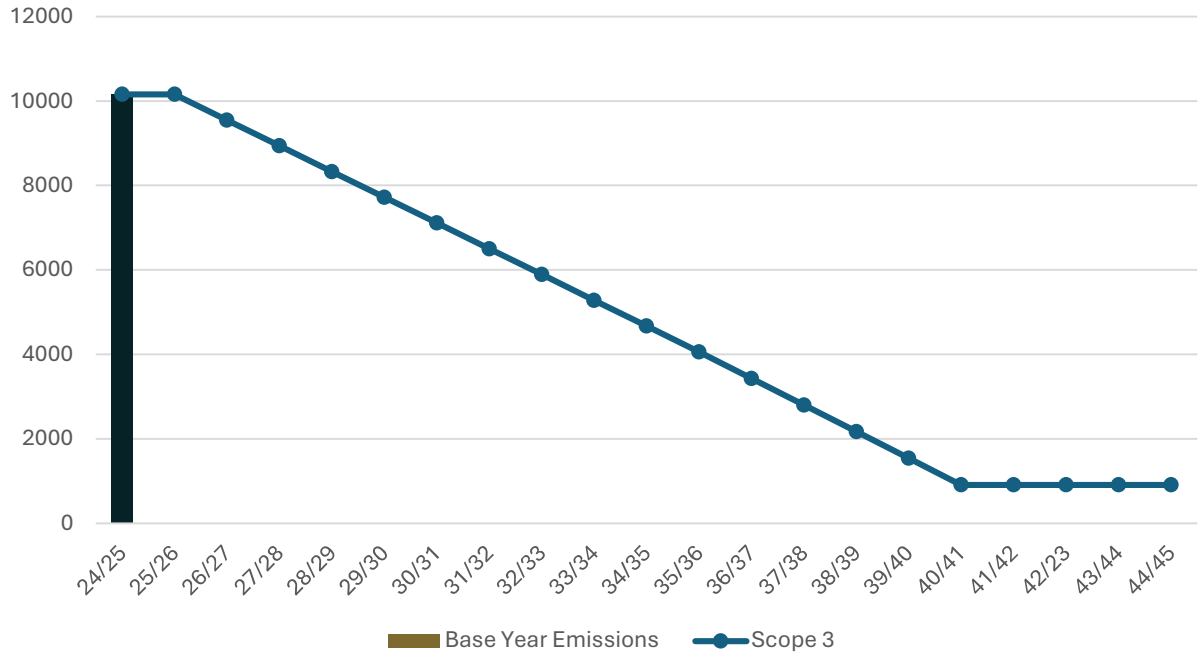


Figure 19: Scope 3 Target Pathway and Base Year Emissions

6.4.1 Purchased Goods and Services

Emissions from the products and services purchased from tier 1 suppliers in the base year totalled 926 tCO_2e.

All product and service sectors are targeted towards a 2050 trajectory with emissions decreasing by 1- 2% each year. To achieve a recommended target of 2040, the majority of purchasing categories are targeted to achieving a 50% reduction by 2035. Key actions to achieve this target include consolidation of multiple suppliers offering similar services, purchasing lower carbon products and services, and increasing in-house staff to reduce reliance on subcontractors to have more control over onsite related emissions.

A key initiative is the adoption of a Green Purchasing Policy. This policy will embed emissions considerations into all purchasing decisions, requiring the total carbon impact of products and long-term contracts to be assessed for compatibility with net zero targets before commitments are made. Where relevant, a carbon cost can be incorporated into purchasing criteria to reflect the offsetting required for any residual emissions.

In line with GHG Protocol guidance, supplier contracts will be updated to require the provision of emissions and activity data on request, ensuring transparency and supporting more accurate Scope 3 reporting. The Green Purchasing Policy is targeted for introduction by the end of 2025/26.

6.4.2 Upstream Transport and Distribution

Emissions from the transportation and distribution of purchased products from Cotswold Energy Group suppliers to their sites and storage facilities totalled 8972 tCO_2e.

An initial reduction of 10% has been set in 26/27 and is expected to be achieved by the organisation minimising deliveries by consolidation where feasible. Reduction of 60% by 2035 have been set with an expectation that electric good freighting vehicles will be more accessible by this date and low carbon suppliers will be opted for.

It is important to note that there is a moderate degree of estimation for product delivery emissions particularly relating to distances and weights transported. Improvement in the granularity of data collected regarding transportation of goods is recommended.

6.4.3 Waste Generated in Operations

Emissions from waste generated in operations were less than 1 percent of the total carbon footprint in the baseline year and are considered immaterial for the purposes of the net zero reduction plan. However, Cotswold Energy Group Ltd remains committed to best practice in waste management and continuous improvement in this area.

Initiatives should be included in the rollout of new Procurement Policies to focus and prioritise the purchase of products that can be recycled, refurbished, or upcycled. Waste management practices should maintain to be monitored to ensure that the recycling rate is as high as possible, and if current waste management suppliers change their methods to move over to a different company.

If waste emissions become material in future reporting cycles, specific reduction targets and action plans will be established. The group will also track developments in national waste management infrastructure and adjust targets as needed to align with progress towards net zero waste across the UK by 2050.

6.4.4 Business Travel

A Green Travel Policy would aid a reduction gradually per year as staff are encouraged to prioritise low carbon vehicles for hire cars, public transport and Zero Carbon Hotel Rooms when feasible and practical. A process for identifying such choices should be added to the expense process in conjunction with the policy.

The travel industry is expected to decarbonise by 2050 in line with UK commitments, having by30/31. Additionally with the expected increase of EVs on the road by 2030, this will reduce emissions from hire cars and employee mileage on the expectation that more EV will be available.

6.4.5 Employee Commuting

The number of EVs in the UK is forecast to be significantly higher (1 in 5 vehicles on the road are expected to be electric) by 2030, which will lead to reductions. New incentives are also to be introduced as early as 24/25 to meet targets and shift employee driving behaviour. This could include fiscal incentives for EV purchasing schemes, onsite EV charging facilities, supporting with homebased charge point installation, offering preferential parking access for those with low emission vehicles and educating employees on the benefits of EVs.

6.5 Emissions Offsets

Carbon offsets (sometimes called Carbon Credits) need to be measurable, verifiable emissions reductions or removals from certified climate action projects. These projects remove, reduce or prevent greenhouse gas (GHG) emissions from the atmosphere.

However, only emissions removal is acceptable as part of Net Zero status, as required under the GHG Protocol. After a company has achieved its long-term target and cut emissions by more than 90%, it must use permanent carbon removal and storage to counterbalance the final less than 10% of residual emissions that cannot be eliminated.

An example of how this would look in regard to the Net Zero Target, please see Figure 16.

6.6 Monitoring & Review

If future improvements in data quality or reporting boundaries result in a restatement of our baseline year emissions, our net zero targets and milestones will be recalculated to ensure alignment with the most recent, accurate data available. The percentage reduction commitment will remain unchanged.

Immaterial categories (< 1% total emissions) that are also not subject to regulatory compliance are not prioritised in the net zero reduction plan, including Capital Goods (3.2), Fuel- and Energy-related Activities (3.3), and Leased Assets (3.8), will continue to be monitored and will be addressed if their materiality changes in future reporting years.

Appendix A –Scope 1,2 & 3 Methodology and Data Quality Review Following GHG Protocol

This appendix outlines the data sources, calculation methods, and key assumptions applied to estimate Scope 3 emissions categories in accordance with the GHG Protocol Corporate Standard. The methods used reflect the quality and availability of data at the time of reporting and may be refined in future reporting years as data collection improves.

Scope Category	Methodology Used	Primary Data Source	Secondary Data Source	Assumptions (notes)	Data Quality
1. Fuels and fugitive emissions	Activity-based	Fleet management tracking system. LPG consumption estimates for forklift (litres per year) Number and refrigerant type of air conditioning units (R-410A)	DESNZ, 2023, Delivery Vehicles, Diesel Van, Class I (up to 1.305 tonnes; 1.305 to 1.74 tonnes; (1.74 to 3.5 tonnes; Dual purpose 4X4); Passenger Vehicles, Petrol, Supermini; Fuels, LPG; Refrigerant & Other, R401A	Forklift LPG use was estimated at 40 kg/month, converted to litres. Refrigerant leakage assumed at 3% annual leakage per air conditioning unit (based on typical operational loss rates).	Data quality is high for vehicle records, including detailed annual mileage per vehicle class. LPG lower quality as consumption is based on standardised operational patterns rather than metered fuel use. Refrigerant emissions rely on assumed leakage rates, as direct measurements were unavailable.
2. Purchased fuel	Location-based and market-based methods (both reported)	Meter readings and utility bills. Supplier specific	DESNZ, 2023, Electricity: UK; British Gas Bills 2023–2024, CO2e per kWh	Only 1 Upper Mill has supplier based EFs so for Market-based National grid EFs was still used for Mill Place South.	High quality

3.1 Purchased goods and services	Spend-based	Finance Records	University of Leeds, 2021, GHG Multipliers by SIC 1990-2021 Bank of England,2024, Inflation Rate 2021-2023	Tier 1 suppliers identified as 80% of total spend	Data quality for this category is considered low, as no primary activity data (e.g. quantities of materials or services delivered) was available. Emissions were calculated solely using a spend-based method, which provides a high-level estimate but introduces significant uncertainty. Additionally the SIC codes are for Wholesalers and not specific to Solar of HCAV manufacturer's in most cases, so are underestimating the emissions, particularly for Solar PV equipment, which notoriously have high EFs.
3.2 Capital Goods	Spend-based	Finance Records	University of Leeds, 2021, GHG Multipliers by SIC 1990-2021 Bank of England,2024, Inflation Rate 2021-2023		Using spend-based method for this category was fine as it's a negligible emissions source.
3.3 Fuel- and Energy-Related Activities (Not Included in Scope 1 or 2)	Average-data	Scope 1 & 2 data	DESNZ, 2023, WTT (Well-To-Tank)- UK Electricity (generation, (T&D), Electricity: UK, kWh; fuels, Liquid fuels, Diesel (100% mineral diesel), litres; Petrol (100% mineral petrol), litres; Gaseous fuels, LPG, litres		High quality

3.4 Upstream transportation and distribution	Distance-based (using average distances and weights for around 80% of suppliers).	Finance Records (spend and delivery frequency), invoice records (weights), and supplier-provided distances (where available)	DESNZ, 2023, Freighted Goods (km.tonne); Delivery Goods (km), HGV (all diesel), Rigid <3.5 - 7.5 tonnes, Average laden	Where distance data was unavailable, an average of 50 km per delivery was applied based on known delivery frequencies. Weight data was estimated from a sample of invoices and extrapolated to remaining deliveries.	Data quality is low, as both weights and delivery distances were based on averages rather than precise values. Only 4 suppliers emissions included accurate data. The only consistent and reliable variable across all suppliers was delivery frequency. Weight and distance estimates introduce a high degree of uncertainty into emissions calculations. Average values were used instead of the spend-based method, as no separate delivery spend data was available due to delivery charges being included within the purchase price of goods.
3.5 Waste	Waste-type specific (including Transportation)	Waste management supplier reports, incl. collection and drop off locations	DESNZ, 2023, Waste Disposal, Construction, Aggregates, Closed-loop; Metal, Closed-loop; Average Construction, Closed-loop; Waste Disposal, Construction, Wood, Closed-loop; Refuse, Commercial and industrial waste, Landfill; Paper and board: board, Closed-loop DESNZ, 2023, Freighted Goods, HGV (all diesel), Rigid (>3.5-7.5 tonnes), tonne.km, Average Laden	Transport included. Assumes all transport by rigid diesel HGV, 3.5–7.5 tonnes, average laden.	High quality

3.6 Business Travel	Hybrid: Distance-based for mileage; spend-based	Finance Records (debit summaries for hotels, leasing etc.); Staff mileage claims	University of Leeds, 2021, GHG Multipliers by SIC 1990-2021 Bank of England,2024, Inflation Rate 2021-2023 45p per mile mileage rate DESNZ, 2023 Passenger Vehicle, Cars (by size), Average Car, Unknown	All expense claims categorised as "Business Travel" were assumed to be mileage claims, due to lack of itemised breakdown.	Data quality for this category is considered low. A large proportion of emissions were calculated using the spend-based method, which is inherently less accurate than activity-based methods. In addition, all business travel expense claims were treated as staff mileage claims due to lack of itemised data; however, these may have included other travel-related costs (e.g. accommodation, subsistence, public transport).
3.7 Employee Commuting	Distance-based	Employee staff count and postcodes	DESNZ, 2023, Cars (by size), Average Car, Petrol; Diesel; Hybrid Department for Transport, NTS 2023: Car availability and trends in car trips, Types of vehicles people own	All employees assumed to commute 5 days per week by car and NTS car usage trends: 61% petrol, 31% diesel, 8% hybrid. Distances calculated using postcode mapping. Carpooling and public transport not captured.	Data quality was medium as an activity-based method was used, however assumptions around travel mode and commuting frequency introduce uncertainty.
3.8 Upstream Leased Assets	Average-data	Floor area (m^2) of rented site	Scope 2 emissions and office size for owned office	Emissions factor calculated by dividing Scope 2 emissions of owned office by its floor space and multiplying by the rented floor area	Moderate – relies on intensity assumption from owned office. Method adheres to GHG Protocol guidance for sites without direct consumption data.

Appendix B – ISO 14064-1 GHG Emissions Categories and Data Table

Table 5: ISO 14064-1 Category 1 GHG emissions detailed by GHG source

Emissions Source	CO2 Emissions (tCO2e)	CH4 Emissions (tCO2e)	N2O Emissions (tCO2e)	Sum of Emissions (tCO2e)
Citroën Berlingo(s)	3.14	0.00	0.04	**3.18**
Peugeot Bipper(s)	4.92	0.00	0.06	**4.98**
Mercedes-Benz Citan(s)	2.75	0.00	0.03	**2.79**
Ford Transit Connect(s)	4.03	3.99	0.00	**8.01**
Ford Transit Custom(s)	5.83	0.00	0.04	**5.87**
Delivery Fleet	215.32	0.01	1.42	**216.74**
Peugeot Partner(s)	33.02	0.00	0.22	**33.24**
Ford Ranger(s)	46.84	0.00	0.31	**47.15**
Renault Trafic(s)	0.89	0.00	0.01	**0.90**
Vauxhall Vivaro(s)	33.78	0.00	0.28	**34.07**
Pool Cars	1.44	0.00	0.02	**1.46**
Warehouse Forklift	0.75	0.00	0.00	**0.75**
2 Air Conditioning Units (Mitsubishi SRK25ZSP-W)	1.11	0.00	0.00	**1.11**

Table 6: ISO 14064-1 Category 2 GHG emissions detailed by GHG source

Emissions Source	CO2 Emissions (kgCO2e)	CH4 Emissions (kgCO2e)	N2O Emissions (kgCO2e)	Sum of Emissions (kgCO2e)
1 Upper Mill (Owned Office Space) – Market based	26.35	0.12	0.16	**26.62**
Mill Place South (Rented Warehouse)	4.92	0.02	0.03	**4.97**

Table 3: ISO 14064-1 data categorisation table and associated emissions (tCO2e)

Category	Description	Emissions (tCO2e)
1	Direct GHG emissions & removals in tCO2e	**360.25**
1.1	Direct emissions from stationary combustion	0.75
1.2	Direct emissions from mobile combustion	358.39
1.3	Direct process emissions and removals arising from industrial processes	
1.4	Direct fugitive emissions arising from release of GHGs in anthropogenic systems	1.11
1.5	Direct emissions and removals from land use, land use change, and forestry	
2	Indirect emissions in tCO2e	**31.44**
2.1	Indirect emissions from imported electricity	31.44
2.2	Indirect emissions from imported energy	
3	Indirect GHG emissions from transportation	**9150.14**
3.1	Emissions from upstream transportation and distribution	8972.32
3.2	Emissions from downstream transportation and distribution	
3.3	Emissions from employee commuting & teleworking	66.31
3.4	Emissions from client and visitor transport	
3.5	Emissions from business travel	111.50
4	Indirect GHG emissions from products used by the organisation	**1053.38**
4.1	Emissions from purchased goods	962.26
4.2	Emissions from capital goods	24.76
4.3	Emissions from the disposal of solid and liquid wate	47.78
4.4	Emissions from the use of assets	18.59
4.5	Emissions from the use of services that are not described in the above subcategories	
5	Indirect GHG emissions associated with the use of products from the organisation	
5.1	Emissions or removals from the use stage of the product	
5.2	Emissions from downstream leased assets	
5.3	Emissions from end-of-life stage of product	
5.4	Emissions from investments	
6	Indirect GHG emissions from other sources not specified	**61.69**

Appendix C – PPN 06/21 Carbon Reduction Plan

Supplier name: Cotswold Energy Group Ltd

Publication date: 17/09/2025

Commitment to achieving Net Zero

Cotswold Energy Group Ltd is committed to achieving Net Zero emissions by 2040.

Baseline Emissions Footprint

Baseline emissions are a record of the greenhouse gases that have been produced in the past and were produced prior to the introduction of any strategies to reduce emissions. Baseline emissions are the reference point against which emissions reduction can be measured.

Baseline Year: Financial Year 2023-2024	
Additional Details relating to the Baseline Emissions calculations.	
This represents the company's first full carbon footprint. The boundary was set using an operational control approach, supplemented by mandatory Scope 3 categories required under PPN 06/21. Emission factors were primarily sourced from the UK Government's 2023 DESNZ conversion factors. Spend-based estimates were used where activity data was unavailable, supported by the University of Leeds EEIO model.	
Baseline year emissions:	
EMISSIONS	**TOTAL (tCO_2e)**
Scope 1	360.25
Scope 2	31.44
Scope 3 **(Included Sources)**	10265.2
Total Emissions	10656.89

Current Emissions Reporting

Reporting Year: 2023-2024 (same as baseline)	
EMISSIONS	TOTAL (tCO_2e)
Scope 1	360.25
Scope 2	31.44
Scope 3 (Included Sources)	10265.2 Sources: • Purchased Goods and Services • Capital Goods • Fuel- and Energy-Related Activities • Upstream Transportation and Distribution • Waste Generated in Operations • Business Travel • Employee Commuting • Upstream Leased Assets
Total Emissions	10656.89

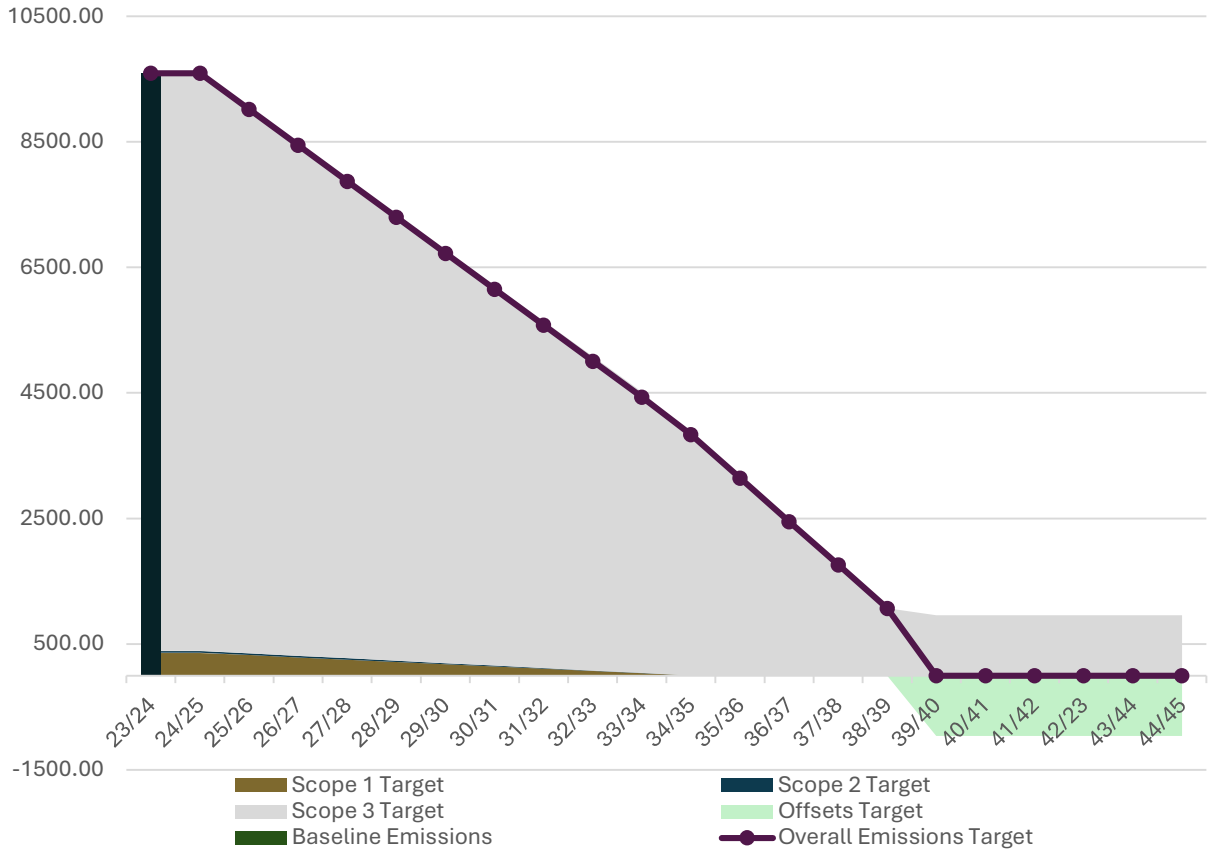
Emissions reduction targets

In order to achieve Net Zero, CEG has adopted the following targets:

- 50% reduction in Scope 1 and 2 emissions by 2029/30
- 100% reduction in Scope 1 and 2 emissions by 2035/36
- 60% reduction in total emissions by 2035
- 91% reduction in total emissions by 2040
- Remaining residual emissions (<10%) to be offset via certified permanent carbon removals

We project that carbon emissions will decrease over the next five years to 8605.52 tCO_2e by 2028. This is a reduction of 18.45%.

Progress against each scopes targets can be seen in the graph below:



Carbon Reduction Projects

Completed Carbon Reduction Initiatives

As this Carbon Reduction Plan represents Cotswold Energy Group Ltd's baseline year (FY2023–2024), no emissions reduction initiatives have yet been implemented. This report establishes the baseline against which future reductions will be measured.

In the future we hope to implement further measures such as:

- Introduction of biodiesel blending (e.g., B20) for fleet vehicles to reduce Scope 1 emissions
- Transition to a fully electric fleet as vehicle availability and charging infrastructure improve
- Implementation of a Green Procurement Policy to drive lower-carbon purchasing decisions for procurement
- Engagement with Tier 1 suppliers to improve emissions data accuracy (particularly Scope 3.1 and 3.4)
- Establishment of a Green Travel Policy and employee EV incentives for reduction in emissions associated with Business Travel
- Annual review of emissions data and target performance, with continuous improvement built into business planning

Declaration and Sign Off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard[5] and uses the appropriate Government emission conversion factors for greenhouse gas company reporting[6].

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard[7].

This Carbon Reduction Plan has been reviewed and signed off by the board of directors (or equivalent management body).

Signed on behalf of the Supplier:

.....

Date: 07/11/2025 .....

[5] https://ghgprotocol.org/corporate-standard
[6] https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting
[7] https://ghgprotocol.org/standards/scope-3-standard

Appendix D – Emissions Data Table

Table 7: Full breakdown of FY2023/24 GHG Emissions by Scope, Source, and Activity

EMISSIONS CATEGORY (GHG)	DATA SET	2023/24 TONNES OF CO2E	% OF EMISSIONS
Scope 1		360.24	3.39%
Fuels	Company Owned Vehicles Diesel	356.92	3.35%
Fuels	Company Owned Vehicles Petrol	0.75	0.01%
Fuels	Company Owned Vehicles LPG	1.46	0.01%
Refrigerant Gases	Fugitive Emissions (Cooling)	1.11	0.01%
Scope 2		31.59	0.30%
Electricity	Electricity - 1 Upper Mill	26.62	0.25%
Electricity	Electricity - Mill Place South	4.97	0.05%
Scope 3		10246.67	96.32%
Purchased goods and services	Ancillary Services	115.08	1.08%
Purchased goods and services	Financial Services	9.05	0.09%
Purchased goods and services	Installation Materials	430.73	4.05%
Purchased goods and services	Office Supplies	7.67	0.07%
Purchased goods and services	Subcontractors	390.92	3.67%
Purchased goods and services	Tool Hire	8.82	0.08%
Capital Goods	Purchased / Leased Capital Goods	24.76	0.23%
Upstream transport and distribution	Solar Supplies	8583.12	80.68%
Upstream transport and distribution	HVAC Supplies	291.74	2.74%
Upstream transport and distribution	Electrical Supplies	35.06	0.33%
Upstream transport and distribution	General Building Supplies	9.32	0.09%
Upstream transport and distribution	Office Supplies	53.09	0.50%
Fuel & Energy related	Electricity (WTT and T&D)	7.62	0.07%
Fuel & Energy related	Fuels (WTT)	54.13	0.51%
Waste	Aggregates - Recycled	0.02	0.00%
Waste	Average construction - Recycled	0.05	0.00%
Waste	Metals - Recycled	0.01	0.00%
Waste	Paper and board - Recycled	0.04	0.00%
Waste	Wood - Recycled	0.03	0.00%

Waste	Commercial and industrial waste - Landfill	23.37	0.22%
Waste	Transportation	24.24	0.23%
Business travel	Hotel stays	54.35	0.51%
Business travel	Staff Mileage	25.13	0.24%
Business travel	Hire cars	32.02	0.30%
Employee commuting	Car (Diesel)	22.85	0.21%
Employee commuting	Car (Petrol)	43.39	0.41%
Employee commuting	Car (Hybrid)	0.07	0.00%

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