

Streamlined Energy and Carbon Reporting (SECR) Disclosures Reporting Period 1 August 2023 to 31 July 2024

NCG

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Overview

This report provides information on the company's energy use and greenhouse gas emissions for the current reporting year, compared with the previous year's data, in accordance with SECR requirements.

Greenhouse Gas Emissions and Energy Use Data

Greenhouse gas emissions and energy use data for the period 1 August 2023 to 31 July 2024 – UK	Unit	Current reporting year 2023 to 2024	Comparison reporting year 2022 to 2023		
Energy/Other consumption break down used to calcuated emissions					
Gas	kWh	17,552,912	14,595,080		
Electricity ¹	kWh	11,465,080	12,167,499		
Transport Fuel	L	6,073	UNKNOWN		
Other Heating Fuel	L	14,829	3,665		
Fugitive Emissions	kg	68	4		
Scope 1 emissions in metric tonnes CO₂e					
Gas	tCO2e	3,210.43	2,673.01		
Transport Fuel	tCO ₂ e	15.26	17.68		
Other Heating Fuel	tCO₂e	38.80	-		
Fugitive Emissions	tCO2e	131.60	7.58		
Total scope 1	tCO2e	3,396.09	2,698.27		
Scope 2 emissi	Scope 2 emissions in metric tonnes CO ₂ e				
Purchased electricity	tCO ₂ e	2,373.84	2,487.48		
Total scope 2	tCO2e	2,373.84	2,487.48		
Scope 3 emissions in metric tonnes CO ₂ e					
Grey Fleet	tCO2e	17.70	UNKNOWN		
Business Travel (Air, Train, Hotel)	tCO ₂ e	868.37	317.11		
Electricity (Transmission and Distribution)	tCO2e	209.81	360.40		
Water (Supply)	tCO ₂ e	8.63			
Water (Sewerage)	tCO ₂ e	10.26	21.30		
Waste	tCO2e	20.59	UNKNOWN		
Total scope 3	tCO ₂ e	1,135.35	698.81		
Total gross emissions in metric tonnes CO2e					
Total scope 1,2 & 3	tCO ₂ e	6,905.29	5,884.56		
Intensity Ratio					
Intensity ratio	Staff Numbers	2,598	2,499		
Tonnes CO2e per member of staff	tCO₂e/Staff	2.66	2.35		

¹ Includes 3no. Breakspear meters currently under investigation as to whether they are within NCG scope: MSN's: P07A21240 (172,447kWh), P07A22052: (1,694,311kWh), P07A22053: (94,472kWh).

Quantification and Reporting Methodology

We have followed the 2019 HM Government Environmental Reporting Guidelines for calculating emissions. Additionally, the Greenhouse Gas (GHG) Reporting Protocol – Corporate Standard has been applied, using the UK Government's 2024 Conversion Factors for Company Reporting as follows:

EMISSION	kgCO₂e	Unit
Gas	0.1829	kWh
Electricity	0.20705	kWh
Average car (unknown fuel)	0.2686	miles
Diesel Average Car	0.27334	miles
Petrol Average Car	0.26473	miles
Electric Average Car	0	miles
Propane/LPG	1.55713	Litres
Water supply	0.15311	m³
Water Waste	0.18574	m³
Electricity T&D	0.0183	kWh
R410A	1924	kg
Kerosene (Jet Fuel/Aviation Turbin Fuel)	2.5469	Litres
Diesel (100% mineral diesel)	2.66155	Litres
Diesel (average biofuel blend)	2.51279	Litres

Data has been gathered from a variety of sources:

Data	Source
Gas	Utility bills and meters (Systems Link)
Transport Fuel	Shaun Dougal (NCG)
Other Heating Fuel	Callow Oils, Keith Moor (NCG)
Fugitive Emissions	Peter Briggs (NCG)
Purchased electricity	Utility bills and meters (Systems Link)
Grey Fleet	Shaun Dougal (NCG)
Business Travel (Air, Train, Hotel)	Nathan Graham (NCG)
Electricity (Transmission and Distribution)	Utility bills and meters (Systems Link)
Water (Supply)	WAVE
Water (Sewerage)	WAVE
Waste	ISS

Intensity Measurement

The intensity measurement ratio chosen is the total gross emissions in metric tonnes CO_2e per staff member. This is the recommended ratio for our sector², allowing for comparison across similar organisations.

² https://www.gov.uk/government/publications/college-corporation-financial-management-good-practice-guides/streamlined-energy-and-carbon-reporting-for-college-corporations

Measures Taken to Improve Energy Efficiency & Reporting

Kidderminster College Heating:

- Replaced 2no. inefficient gas boilers with 4no. reduced capacity, high efficiency boilers providing a better turn down ratio
- 27no. heat emitters replaced in the building to allow operation at a lower temperature to make the college heat pump ready
- Installation of new TREND BMS control panel and 60 new thermostatic radiator valves to improve heating control
- Most significantly, the ventilation reheat coils have been removed from the wet system and are now fed from newly installed direct expansion units, providing significant carbon savings
- >50% reduction in gas consumption expected as a result of the measures
- Project completion expected November 2024

Kidderminster College Solar and LED:

- Installation of 23.32 kWp Solar System
- LED Lighting Upgrade and Controls
- Installation complete September 2024

District Heating Connection:

Continued partnership with Newcastle City Council working towards connecting the majority of the buildings district heating scheme.

Fluorescent to LED Lighting Upgrade:

- T5, T8 and compact fluorescent lamps are now banned from sale, and existing stocks from suppliers of these lamps are only available until they are exhausted
- LED lighting provides significant energy (~60%) carbon and maintenance savings
- LED Lighting has also been found to increase productivity and help students focus
- Scope: Newcastle Rye Hill Campus
 - o Sports Centre
 - o HQ/Rye Hill House
 - o 6th Form College
 - o Mandela
 - Parsons Tower
 - o Armstrong House
 - o Performance Academy
 - o Lifestyle Academy
 - Scope: Carlisle Carlisle College Campus
 - o Victoria Place
 - $\circ \quad \mbox{Carlisle College of the Arts}$
- Lighting surveys completed for main campus buildings for full LED upgrade
- Successful contractor to be appointed November 2024

Improved Data Collection and Monitoring:

- Updated Energy Monitoring & Targeting system capturing energy bill data
- ION Energies Solar Generation Monitoring installed at Kidderminster college
- Improved scope 3 data capture for grey fleet and waste

Standardised Carbon Emissions Framework for Further and Higher Education (SCEF)

• Continue to develop Carbon reporting in line with DFE voluntary guidance developed by the EAUC

• Commence preparation and implementation of the EAUC to adopt a long-term investment approach and arrange sustainable and reliable funding within each of the three categories of supply chain, built environment and travel/transport

Development of Solar PPA Agreements at Carlisle and West Lancashire Colleges

- Continue to develop 379kWp total solar schemes over the colleges
- Working in collaboration with SRNG to provide a funded Solar PPA scheme
- Aiming to commence in early 2025

InMetriks (Carbon Architecture) Trial:

- InMetriks by Carbon Architecture is a cloud-based platform that helps organisations in energy-intensive industries improve energy efficiency and reduce carbon emissions. It provides real-time monitoring and data analysis to optimise energy use, track performance, and ensure regulatory compliance. The platform supports the achievement of sustainability targets, such as NetZero, by identifying energy-saving opportunities and improving operational efficiency. Benefits include lower energy costs, reduced environmental impact, and enhanced reporting capabilities for compliance and sustainability efforts.
- Trial initiated at Southwark Campus, due to commence before Christmas 2024