

# Chelmsford College

## Streamlined Energy and Carbon Reporting (SECR) 2022/23 (completed by M. Frost & Associates Ltd.)

UK Greenhouse gas emissions and energy use data for the period 1 August 2022 to 31 July 2023	Current reporting year 2022/23	Previous reporting year 2021/22
Energy consumption used to calculate emissions (kWh)	2,256,692	Not provided
Energy consumption break down (kWh):		
• gas	1,188,417	Not provided
• electricity	1,051,061	Not provided
• transport fuel	17,214	N/A
<b>Scope 1 emissions in metric tonnes CO<sub>2</sub>e</b>		
Gas consumption	216.96	235.86
Owned transport – mini-buses	4.31	3.01
<b>Total Scope 1</b>	<b>221.26</b>	<b>238.87</b>
<b>Scope 2 emissions in metric tonnes CO<sub>2</sub>e</b>		
Purchased electricity	217.65	339.47
<b>Scope 3 emissions in metric tonnes CO<sub>2</sub>e</b>		
Business travel in employee-owned vehicles	N/A	N/A
<b>Total gross emissions in metric tonnes CO<sub>2</sub>e</b>	<b>438.91</b>	<b>578.34</b>
<b>Intensity ratio</b>		
Tonnes CO <sub>2</sub> e per Pupil 2022-23 (2,221)	0.20	0.14* see notes
Tonnes CO <sub>2</sub> e per Staff 2022-23 (252)	1.74	Not provided

**\*Notes:** See emissions intensity ratio section for explanation re current and previous year figures. The previous SECR report 2021/22 quoted the emissions in kgCO<sub>2</sub>e, the current SECR report quotes the emissions in tonnes of CO<sub>2</sub>e – the previous year figures have been converted for comparison.

## SECR Scope 1 and 2

Chelmsford College is required to submit a SECR report which must state the annual gross quantity of emissions in tonnes of carbon dioxide, and kWh energy usage, for electricity, gas and transport.

**Scope 1 - direct emissions:** Includes emissions from activities owned or controlled by the academy trust that release emissions directly into the atmosphere. Examples include emissions from burning gas for heating, and diesel for owned transport.

**Scope 2 - indirect emission:** Includes emissions from consumption of purchased electricity. These are a consequence of the academy trust's activities but are from sources not owned/controlled.

**Scope 3 - other indirect emissions:** Emissions that are as a consequence of the academy trust's actions, but the source is not owned or controlled, and which are not classed as scope 2 emissions. For example business travel in private staff cars.

## Emissions intensity ratio

The report must state at least one metric which expresses the academy trust's annual emissions in relation to a quantifiable factor. Metric tonnes of CO<sub>2</sub>e per pupil has been provided (0.20), an additional intensity ratio has also been provided for staff numbers.

Comparison to previous reporting year – the 2021/22 intensity ratio of 0.14 was calculated using a student number figure of 4,024. This year the student number figure supplied is 2,221. For direct comparison using the current student numbers the 2021/22 intensity ratio would be 0.26, meaning reduction in emissions this year at 0.20 tonnes of CO<sub>2</sub>e per student.

## Methodology

Academy trusts are required to disclose the methodology used to calculate the required information for the SECR. There are several widely recognised independent standards available (as set out in the Guidelines) and the standard used in this report is the GHG Reporting Protocol - Corporate Standard, where all conversion factors have been obtained.

**Gas & Electric:** The college takes and records regular meter readings of their gas and electric meters – these have been checked, signed off, and used to calculate the kWh energy consumption during the accounting period 01/08/22 – 31/07/23. Electric meters read in kWh, gas meters read in meters cubed (m<sup>3</sup>). To calculate kWhs of gas from m<sup>3</sup>, the density of gas (kg/m<sup>3</sup>) has been used with the kWh per kg figure, withing the GHG standard, to produce a figure of 11.13716 kWh per m<sup>3</sup> of gas.

### **GHG conversion factors used (kWh to kgCO<sub>2</sub>e)**

Gas - 0.18256

Electric - 0.207074

**Owned transport (minibuses):** The appropriate GHG conversion factors have been used with the milage recorded for each vehicle (total 10,626 miles) to calculate the kWh (x1.62) and kg CO<sub>2</sub>e (x0.40524).

**Tonnes of CO<sub>2</sub>e:** kg of CO<sub>2</sub>e converted to metric tonnes (x0.001).

### **Energy efficiency action / Measures taken to improve energy efficiency**

The report must include a narrative description of the principal measures taken to improve energy efficiency in the relevant year. Chelmsford College is committed to improving it's energy efficiency, reducing energy usage and carbon emissions where practically possible. The following works have been carried out during the accounting year 01/08/22 – 31/07/23:

- An electric vehicle charging point has been installed at Moulsham Street campus.
- External - All perimeter security lights have been upgraded to LED.
- Internal refurbishment projects – where occurring across the sites, LED lighting has been installed as standard
- Common areas - Lighting PIR sensors have been installed, reducing electric wastage.
- Brick and woodwork shops, IT office and M109 - new LED lighting installed.
- A sustainability committee has been formed, open to participation and contribution from students and staff, meeting quarterly, headed by the principal. The committee is looking to appoint a sustainability estates manager.
- Chelmsford College is committed to reducing its impact on the environment and as new equipment is required, old equipment will be replaced with energy efficient alternatives where possible.