



Streamlined Energy and Carbon Report

New non-statutory guidance, in September 2020 requests that Colleges report their carbon emissions. The 2018 Regulations are designed to increase awareness of energy costs within organisations, provide them with data to inform adoption of energy efficiency measures and to help them to reduce their impact on climate change. They also seek to provide greater transparency for stakeholders.

Greenhouse gas emissions and energy use data for the period 1 August 2019 to 31 July 2020	
Energy consumption used to calculate emissions (kWh)	6,388,854
Energy consumption break down (kWh)	
Gas	3,634,670
Electricity	2,453,724
% of Electricity on Green Tariff (nuclear)	100%
Transport fuel includes: - owned, leased fleet, hired cars and minibuses plus business miles (kWh)	300,459
Scope 1 emissions in metric tonnes CO₂e	
Gas consumption	672
Owned transport and Managed (leased fleet and hire cars) *	28
Total scope 1	700
Scope 2 emissions in metric tonnes CO₂e	
Purchased electricity, including Transmission and Distribution emissions *	621
Scope 3 emissions in metric tonnes CO₂e	
Business travel in employee-owned vehicles	46
Total scope 3	46
Total gross emissions in metric tonnes CO₂e- for required reporting	1,367
Intensity ratio - Full Time Staff Equivalent (471)	471
Tonnes CO ₂ e per FTE member of staff	2.9
Tonnes of CO ₂ per total number of staff (751,) for required reporting	1.8

* Note we have previously reported Managed fleet and T & D as Scope 3 in our Carbon Management Plans (CMP) 1 and 2.

The Managed fleet emissions were calculated using mileage and vehicle type, a method used since 2010, for CMP1 and 2. The litres of fuel method, would deliver a figure of 21 tonnes of carbon, and we propose to switch to this method for our new Carbon Management Plan 3.

We await further data updates for two leased buildings.

Quantification and Reporting Methodology

We have followed the 2019 HM Government Environmental Reporting Guidelines. We have also used the GHG Reporting Protocol – Corporate Standard and have used the 2020 UK Government’s Conversion Factors for Company Reporting.

Intensity measurements

The chosen intensity measurement ratio is total gross emissions in metric tonnes CO₂e per staff member, the recommended ratio for the sector. In addition, we have used the Full Time Equivalent staff number, as a considerable proportion of our staff are part time.

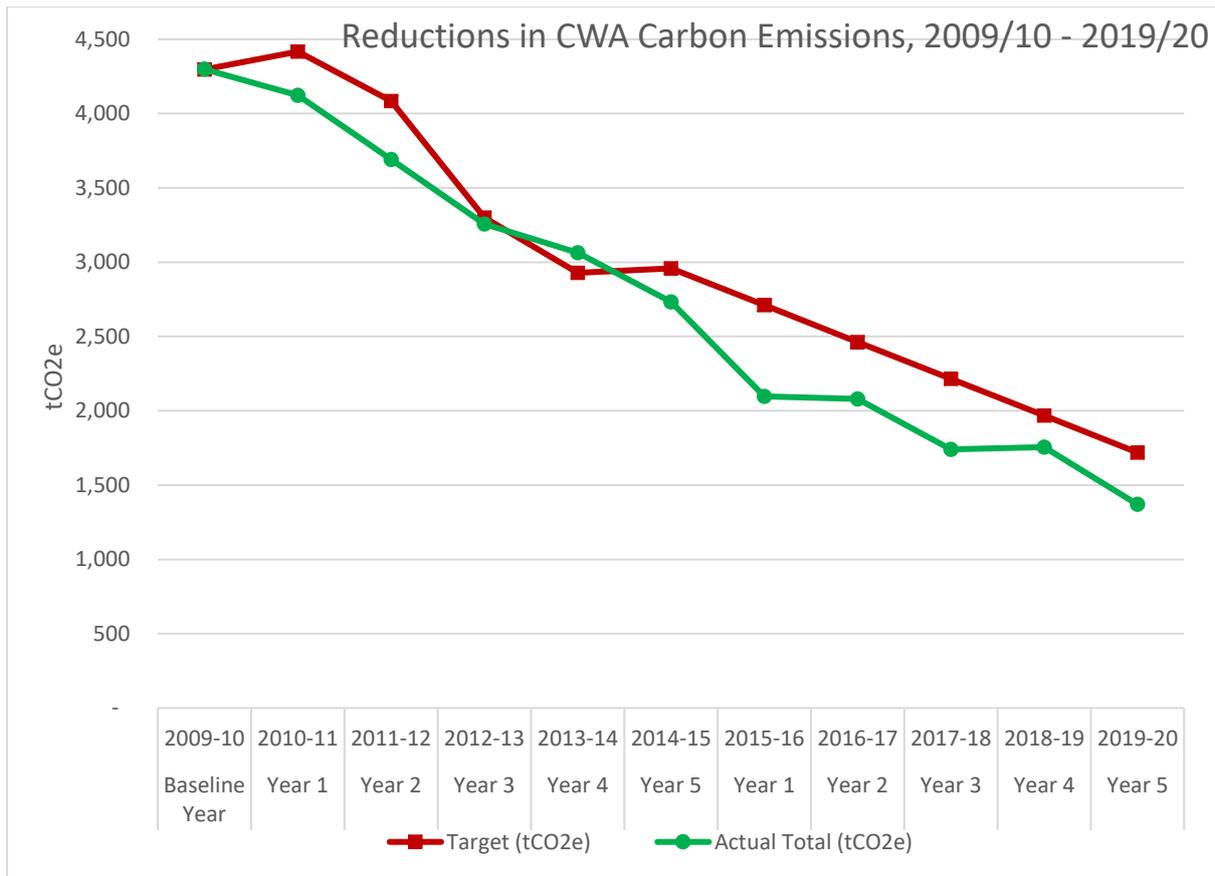
Measures taken to improve energy efficiency 2019-20

- Adjusting Building Management Systems to account for detailed building occupancy, including evening classes
- Closing buildings in the summer holidays (August 2019), when staff occupancy rates are low
- Replacing lighting with LEDs.
- Replacing leased fleet cars
- Driving less business miles, more Zoom meetings
- Shutting down fridges and freezers, which are not needed in holiday periods, for hospitality students.

Improvements in last ten years

Since our base year of 2009-10, we have achieved our target of a 60% reduction in tonnes of tonnes of t CO₂e and achieved a 67% reduction, by 2019-20. This has been achieved by the demolition of old buildings, to be replaced with energy efficient buildings, incorporating biomass and PV technology, efficient insulation, LEDs, and modern Building Management Systems. As a result of these large reductions in our Carbon emissions we won the coveted ‘Carbon Reduction’ category, for smaller institutions, at the 2017 UK and Ireland Green Gown Awards

www.greengownawards.org/2017-winnersxxcfd



Our transport miles have reduced by 72%, since the baseline year, as we communicate more by e mail, intranet and Zoom. The production of the electricity generation in the UK has changed; due the decrease in coal generation, and an increase in gas and renewables generation, accounting for a 50% reduction in emissions from electricity generation from 2015-20. Against this backdrop, the College must find new ways to reduce our consumption in real terms.

The future

We plan to install more submetering and improve our Building Management Systems. When it is safe to do so, we will return to closing buildings if they have low occupancy rates in the holiday periods. We are undertaking feasibility studies for more energy efficient technology when plant needs replacing. We are currently installing more insulation at our Cambridge Campus. We plan to engage staff and students in a new sustainability training programme, to raise awareness of issues and assist us in meeting our aims. We are also working on new targets for our third Carbon Management Plan.