

2022/23 Annual carbon emissions report for the University of Cambridge

Reporting period:	1 August 2022 - 31 July 2023
Our reporting boundary has been defined under:	The Operational Control Approach. Please refer to our Methodology Statement for full details of how we have compiled the figures in this report.
Emissions scopes included in our report:	We have measured our scope 1 and 2 emissions, with the exception of fugitive emissions and enteric emissions, and some of our scope 3 emissions. These exclusions are due to a lack of available data and methodology
Our carbon reduction target(s):	We have adopted a Science Based Target, which commits us to reduce our scope 1 and 2 emissions to absolute zero by 2048 (with an interim target to reduce emissions by 75% against 2015/16 levels by 2030). All figures are reported as tonnes carbon dioxide equivalent (tCO ₂ e)

Reporting year

Emission source	Reporting year		Commentary, including specific exclusions
	2022/23	2021/22	
	tCO ₂ e	tCO ₂ e	
Scope 1			
Gas	19,102	19,573	
Oil	306	252	
Biomass	2	1	The carbon conversion factors used for these calculations only account for the nitrous oxide and methane emissions from biomass combustion; the carbon dioxide emissions value is set to zero to account for the carbon dioxide absorbed by fast-growing bio-energy source during their growth.
Fuel used in owned vehicles	221	230	
Refrigerants & researched-based f gas, VOC			Excluded due to a lack of available data and methodology
Land-related emissions & Livestock			Excluded due to a lack of available data and methodology
Scope 2			
Electricity - Location-based emissions	29,834	27,911	
Electricity - Market-based emissions	2,373	3,553	
Purchased heat and steam	1,226	1,157	
Total scope 1 and 2 emissions			
Scope 1 and 2 - Location-based emissions	50,690	49,124	
Scope 1 and 2 - Market-based emissions	23,229	24,766	
Scope 3			
Purchased good and services	277,803	310,742	We use an externally produced tool to estimate our supply chain emissions. This tool estimates emissions on a simple economic input-output basis, so these figures should be regarded as an order of magnitude estimate, rather than an accurate calculation of our supply chain emissions. Screening of 2020/2021 figures recognised this as a high priority category for action and improved data collection. We are working on a supplier engagement methodology to develop hybrid reporting for this category.
Capital goods			Not quantified separately (included in Purchased Goods and Services)
Fuel and energy related activities not included in scope 1 or 2	131	145	This is a record of emissions associated with our use and disposal of water.
Upstream transportation and distribution			Not quantified - screening of 2020/2021 figures recognised this as a high priority category for improved data collection to better understand its impact.
Waste generated in operations	160	133	Screening of 2020/2021 figures recognised this as a low priority category for improved data collection due to low magnitude (it is priority for action)
Business travel	11,468	5,364	Includes staff and research student travel (those on employment contracts). Excludes student business travel (e.g. field trips/conferences). Screening of 2020/2021 figures recognised these exclusions as low priority for action, but medium priority for improved data collection to better understand its impact.
Employee commuting	6,381	5,683	Commuting figures include staff and research student (those on employment contracts) commuting only; we do not currently quantify emissions from student commuting, student termly travel, prospective student travel or homeworking emissions. Screening of 2020/2021 figures recognised these exclusions as low-medium priority for action, but medium priority for improved data collection to better understand its impact (particularly prospective student travel and staff and student hotel stays). The 2022 student survey reported that 99% of students travel around the University sustainably (cycling, walking, public transport, scooter).
Upstream leased assets			Not quantified. Screening of 2020/2021 figures recognised this as medium priority for action, and low priority for improved data collection (as existing data is relatively accessible for the calculation.)
Downstream transportation and distribution			Not quantified, not considered relevant
Processing of sold products			Not quantified, not considered relevant
Use of sold products			Not quantified, not considered relevant
End of life treatment of sold products			Not quantified. Screening of 2020/2021 figures recognised this as low priority for action, and medium priority for improved data collection to ensure materiality is accurately considered.
Downstream leased assets			Where the University has operational control over the building, these emissions have been included in our scope 1 and 2 figures. Otherwise these are emissions from buildings that the University owns, and leases to a third party. Screening of 2020/2021 figures recognised this as a high priority category for action and improved data collection will be required to support this.
Franchises			Not quantified, not considered relevant
Investments			Not quantified. Screening of 2020/2021 figures recognised this as a high priority category. Reporting on this category will be separate from the 'main' University report, due their different way of operating and resulting methodology, compared to the academic activities of the University.
Out of scope emissions			
Direct carbon dioxide emissions from biomass consumption	52	48	These do not form part of our emissions but we have reported them for transparency.
Notes:			
<p>In 2019 the University entered into a Power Purchase Agreement (PPA). As the PPA meets the Greenhouse Gas Protocol's 8 quality criteria for reporting market-based emissions, it results in a genuine carbon reduction; this is reflected in our market-based emissions figure. In line with best practice (https://ghgprotocol.org/scope_2_guidance), in reporting progress against our SBT, we continue to report both our location-based and market-based emission figures.</p>			
Reasons for change in emissions:			
<p>Our location-based carbon emissions increased by 3.19% compared with the previous year. This was largely due to a 7.1% increase in the UK electricity carbon factor. Our market-based carbon emissions have decreased by 6.2% on the previous year, keeping us on track to meet our target. This was primarily due to a 2.4% reduction in total gas consumption compared to the previous year and lower electricity consumption at the Cambridge Biomedical Campus.</p>			