

2020/21 Annual carbon emissions report for the University of Cambridge

Reporting period:	1 August 2020 - 31 July 2021
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 some of our scope 3 emissions. We do not currently have robust data for all of our scope 3 emission sources.
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. As an interim target, we need to reduce our emissions by 75% against 2015/16 levels by 2030. All figures are reported as tonnes carbon dioxide equivalent (tCO ₂ e)
Baseline year for our target and reporting:	2015/16

Emission source	Reporting year						Commentary, including specific exclusions
	2020/21	2019/20	2018/19	2017/18	2016/17	2015/16 (Baseline year)	
Scope 1							
Gas	22,982	19,313	18,399	18,795	18,130	16,385	
Oil	243	215	205	198	243	239	
Biomass	3	2	5	1	6	7	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	236	248	300	238	277	326	
Fugitive emissions							We do not currently measure fugitive emissions from our estate; we are exploring options for quantifying this emissions source in future
Scope 2							
Electricity - Location-based emissions	29,843	32,398	37,300	41,049	49,823	56,214	
Electricity - Market-based emissions	4,878	27,658	37,300	41,049	49,823	56,214	
Purchased heat and steam	1,799	1,756	1,663	1,733	1,255	1,658	
Total scope 1 and 2 emissions							
Scope 1 and 2 - Location-based emissions	55,106	53,931	57,872	62,014	69,734	74,828	
Scope 1 and 2 - Market-based emissions	30,141	49,192	57,872	62,014	69,734	74,828	
Scope 3							
Purchased good and services	365,961	385,000	395,000				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
Capital goods							Not quantified
Fuel and energy related activities not included in scope 1 or 2	167	419	456	437	345	357	These are emissions associated with our use and disposal of water
Upstream transportation and distribution							Not quantified
Waste generated in operations	117	68	93	88	112	435	
Business travel	508	9,218	16,259	17,596	16,254	12,082	
Employee commuting	3,263	5,492	13,653	11,392	11,870	8,029	Commuting figures include staff commuting only; we do not currently quantify emissions from student commuting. A 2015 survey found that 91% of students commute by walking or cycling
Upstream leased assets							Not quantified
Downstream transportation and distribution							Not quantified
Processing of sold products							Not quantified
Use of sold products							Not quantified
End of life treatment of sold products							Not quantified
Downstream leased assets							These are emissions from buildings that the University owns, and leases to a third party. Where the University has operational control over the building, these emissions have been included in our scope 1 and 2 figures.
Franchises							Not quantified
Investments							Not quantified
Out of scope emissions							
Direct carbon dioxide emissions from biomass consumption	70	41	104	32	169	176	These do not form part of our emissions but we have reported them for transparency

Notes:

In late 2019 the University entered into a Power Purchase Agreement (PPA). This year we have felt the full effect of this agreement with around 17% of our electricity demand being supplied by UK wind farms via the 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.

Reasons for change in emissions:

In 2020/21 our location-based carbon emissions increased by 2% compared with the previous year. The increased consumption was primarily due to an upsurge in heat demand prompted by an extended winter season and the need for additional ventilation in buildings due to the Covid-19 pandemic. However, our market-based carbon emissions decreased by 39% compared with the previous year (and is 45% below the location-based emissions). This is due to the influence of the PPA and the use of the carbon conversion factor specific to our supplier's generation mix. The ongoing effects of the Covid-19 pandemic have had a significant impact on staff commuting and business travel activity in particular, where there have been sizeable drops in our emissions. Waste emissions increased, mainly due to an increase in construction waste and a proportion of waste collected outside of the University's central waste contract going to landfill.