

Race to Zero Action Plan



RACE TO ZERO

Introduction

Glasgow Kelvin College is happy to participate in the Race to Zero campaign, pledging our commitment to carbon neutrality in the Spring of 2022. The aim of this document is to map out Glasgow Kelvin College's interim and longer-term strategies to reduce our climate impact and to address the implications of the already changing climate. To achieve this plan, specific actions, and targets, outlined below, will need to be realised in the short and long term.

Glasgow Kelvin College's projected route to carbon neutrality is divided into categories by Scope 1, 2, and 3 emissions. The College has used the 2018/19 academic year emissions data as the baseline data from which to measure reductions. Due to the COVID Pandemic, and the extended disruption to day-to-day activities, it is thought that the last year of data prior to the Pandemic would serve as the most accurate footprint baseline from which to measure our progress. It is important to note, however, that the College continued to investigate and implement carbon-reducing estates updates and policies throughout the Pandemic, when feasible.

Scope 1

Scope 1 emissions include the Green House Gas (GHG) emissions that result from the day-to-day operations of the Campus Estate. This is a significant source of emissions, and include emissions related to building on-site heating and college vehicle use.

Source of Carbon Emission	Baseline tCO ₂ e	Proposed Actions	Time-scale	Cost*	tCO ₂ e savings
Gas: Campus Heating Systems	790	Replacement of 1-2 gas boilers with renewable heating alternative (Springburn campus) *	3-5 yr	£500,000 - £2M	30-60% decrease (SB)
		Installation of PV Panels for under-floor heating *	3-10 yr	£500,000 - £1M	10% decrease
		Estate Staff training in BEMS data analysis, interpretation, and response to maximize heating efficiency	1-2 yr	0 - £5,000	10-20% decrease
		Gas Boiler Replacements with renewable alternative throughout 4 College Campuses*	5- 20 yr	£1-5 M	80- 100% decrease
Transport: Campus Vehicle Fleet	16.5	Installation of EV chargers at each campus to increase use of College EVs	1 - 5 yr	£10,000- 50,000	5 –10% decrease
		Renew lease of current EVs & purchase EVs to replace remaining diesel vehicles	3-10 yr	£50,000- £2M	70- 90% decrease

**Feasibility dependent on funding support from sources such as Scottish Central Government Energy Efficiency Grant Scheme.*

Scope 2

Scope 2 emissions are those GHG emissions which are indirectly attributable to Glasgow Kelvin College. These include purchased energy. It is the hope of the College that our journey to Net Zero will be aided by further decarbonisation of the energy grid.

Source of Carbon Emission	Baseline tCO ₂ e	Proposed Action	Time-scale	Cost	tCO ₂ e savings
Purchased Electricity Use	701	Installation of PV Panels to minimize reliance on electrical grid*	3-10 yr	£500,000 - £1M	10-40% decrease
		Replace remaining lighting systems with LED lights*	1-3 yr	£10,000-50,000	10-20% decrease
		Estate Staff training in BEMS data analysis, interpretation, and response to maximize energy efficiency	1 – 2 yr	0 - £5,000	10-20% decrease
		Improve space efficiency by fostering collaborative working spaces & hybrid working practices.	1 – 2 yr	0 - £5,000	1-5% decrease
		General energy efficiency estate improvements in ventilation, insulation, heating, etc.	1-20 yr	£3 M	5-25% decrease
ICT Electricity Use		Develop and implement a timed power shutdown of student and staff IT campus devices. Investigate and implement other power-saving innovations of IT systems.	1-3 yr	£0	5 –10% decrease

*Feasibility dependent on funding support from sources such as Scottish Central Government Energy Efficiency Grant Scheme.

Scope 3

Scope 3 emissions are often difficult to accurately account for, and therefore difficult to set action plans to address, as these encompass all the emissions that the College is associated with up and down its value chain. Scope 3 emissions include purchased goods and services, travel emissions (business and commuting), as well as emissions from waste and water. Meaningful reductions in Scope 3 emissions are contingent upon other partner businesses, institutions, and individuals making similar commitments towards carbon neutrality.

**Some of the College's Scope 3 Baseline carbon emissions are not available, but the College aspires to identify more complete and accurate methods for collecting Scope 3 data in the future.

Source of Carbon Emission	** Baseline tCO ₂ e	Proposed Action	Timescale	Cost	tCO ₂ e savings
Staff business travel (flights)	37.3	Create policy to encourage the use air travel as transportation mode of last resort.	1-3 yr	£0	5 –10% decrease
Staff business travel (other)	22.4	Create policy to encourage renewable modes of transportation over driving, as well as encouraging participation in virtual conferences & meetings.	1-3 yr	£0	5 –10% decrease
Staff Commute	**	Promote utilisation of the College's cycle resources to increase active travel to and from campuses.	1-3 yr	£0	5 –10% decrease

		Incentivise use of public transportation or active transportation			
		Further improve IT platforms and promote hybrid working.	1-3 yr	0 - £5,000	5 –10% decrease
		Install more EV charging stations to encourage staff to choose electric or hybrid vehicles.	1 - 5 yr	£10,000-50,000	5 –10% decrease
Purchased Goods and Services	**	Explore refurbished products and strive to use suppliers who offer products that can be serviced and repaired as opposed to replaced.	1-20 yr	0 - £5,000	10-20% decrease
		Engage with APUC Sustainability team to utilise resources and frameworks referenced in FNT2030 sustainable procurement strategies.	3-5 yr	0 - £5,000	5-10% decrease
		Create scorecard to evaluate suppliers to GKC on their emissions and sustainability practices & select suppliers based on said evaluation.	3-5 yr	0 - £5,000	5-10% decrease
Waste	23.4	Work with ENVA to develop a plan to continue to reduce emissions due to waste management.	1 – 20 yr	0 - £5,000	10 – 20 % decrease
Water	14.5	Continue to monitor water use and identify ways to reduce consumption and waste.	1 – 20 yr	0 - £5,000	10 – 20 % decrease

The Path to Zero

Glasgow Kelvin College has consistently made reducing its carbon footprint a priority and has been informally working towards net zero since publishing its first Climate Change Action Plan in 2015. The College not only met its goal of reducing 2015 carbon emissions by 42% by 2020 but exceeded it with a reduction of 57%. Based on the data provided in the annual Public Sector Climate Change Duties Report documenting our emission reductions to this point, carbon emissions should continue to decline towards zero as the proposals of this Action Plan are realised.

Beyond the Scope of Emissions

Along with this Race to Zero Action Plan, Glasgow Kelvin College is also revising its Climate Change Action Plan to address and respond to other aspects of the Climate Emergency. The College has been a leader in community development and engagement. To ensure a just transition, where all members of the Glasgow community are equipped to deal with the impacts of climate change, Glasgow Kelvin is in a unique position to build more resilient communities and residents. As a Further Education institution, Glasgow Kelvin College's Climate Change Action Plan includes multiple commitments to increase Green Job training, deliver a comprehensive environmental sustainability curriculum, and support behavioural and societal change. The College is also determined to develop more green spaces and increase biodiversity on its campuses to the benefit of its students, staff, and the communities where those campuses are located.

These commitments put forward in this document, as well as the College's updated Climate Change Action Plan will augment the impressive work that the College is already undertaking in response to the Climate Emergency. The College utilises the expertise of its many stakeholders to provide campus events that promote behaviour change, such as Green Week, student orientation events, and Staff training. The College has a long history of supporting active travel through cycling resources and events offered to both students and staff. The East End Community Garden not only provides a learning space for Cookery students to grow their own produce, but it also offers a green area of biodiversity for the surrounding community to enjoy. The College is proud of its efforts in response to the Climate Emergency and looks forward to taking further action as a sustainability leader in Glasgow communities.

Glasgow Kelvin College is committed to reducing greenhouse gas emissions towards achieving Net Zero, as well as providing support for those being affected by the climate transition.